

# AGRICULTURAL OUTLOOK

April 1988

Economic Research Service  
United States Department of Agriculture

Alternative Agriculture  
See page 26

# AGRICULTURAL OUTLOOK

April 1988/AO-140



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The farm sector is continuing its strong income and financial performance of 1987. Net cash income is forecast to be the second highest on record — between \$50 and \$55 billion, down slightly from 1987's \$57 billion. Crop receipts are up from last year, but are more than offset by lower livestock receipts, rising expenses, and lower Government payments.

The income and debt-service problems that plagued agriculture during the 1980's have largely been weathered, although financial problems persist for some producers who acquired long-term debt at high interest rates. A major contributor to increased cash flow is a marked reduction in interest expenses since the difficult 1980-83 years.

Receipts from crop sales are improving as increased domestic and export use, and decreased production, draw down stocks and bolster prices. Receipts from livestock sales should be off slightly, as red meat and poultry production expands almost 2 percent and prices falter. Fruit prices this spring will be below a year ago as larger supplies come to market.

World crop production in 1987/88 is down from last year, while consumption is up. Stocks of all major commodities are down and prices are higher. Stock levels have been large for several years, but world stocks-to-use ratios have fallen. With the exception of coarse grains, the ratios are now close to or even slightly below their 10-year average. However, stocks of corn remain relatively large.

Most price gains this year have been modest. By mid-February, world market prices for most commodities were above a year earlier, but low by historical standards.

Higher world consumption, lower foreign production, and continued relatively low prices have contributed to larger world trade. Cotton and rice are the major exceptions, but cotton trade has slipped only slightly and



remains close to last year's record. U.S. exports are up again; shipments are benefiting from both the larger volume of world trade and a bigger U.S. market share.

USDA issued \$15.6 billion of generic certificates from April 1986 through January 31, 1988, including \$12.5 billion as deficiency and diversion payments. Generic certificate exchanges through February 16, 1988 totaled more than \$13.2 billion.

Since December 1, 1987, generic certificates have generally traded at 3.5 to 4.5 percent above face value, reflecting rising corn and wheat prices and reduced opportunities for PIK-and-roll (exchanging certificates for crops placed as loan collateral in order to avoid storage and interest charges). Certificate premiums for September-November averaged slightly higher, at 5.5 percent above face value.

Fruit prices this spring probably will average slightly lower than a year ago. Large supplies of apples and pears this winter depressed producer prices. During the spring, smaller

supplies of lemons and expected strong demand for oranges and grapefruit likely will keep citrus prices firm and higher than a year earlier. Strawberry prices will weaken from their winter highs as supplies from California increase seasonally.

Legislation passed at the end of the last session of Congress affects implementation of the Food Security Act of 1985. The changes are aimed at reducing agriculture-related budget expenditures by nearly \$1 billion this fiscal year and another \$1-1/2 billion next year.

Ongoing multinational trade negotiations under the General Agreement on Tariffs and Trade (GATT) seek resolution of conflicts between the needs of integrated world economies and independent domestic economies. World agriculture is becoming increasingly dependent on world trade. Trade faltered during the early 1980's but is improving now, even under existing trade agreements. The Uruguay Round of GATT (1987-92) provides an opportunity to remove market distortions and further improve world trade in agricultural commodities.

World barley production is forecast at a record 185 million tons for 1987/88, but trade is expected to be off slightly. Barley trade grew explosively over the last two decades, and continued to increase when trade in other grains decreased, spurred by export subsidies and increasing surpluses in exporting countries. A dramatic rise in imports by Saudi Arabia, now the world's largest barley importer, was sparked by rising feed demand and import subsidies, but reduced imports are expected this year. Most world barley trade is for feed use.

Farmers are trying alternative management practices, such as reduced inputs, integrated pest management, different crop rotations, and different weed control methods. Alternative farming systems emphasize making profits and protecting the environment.



## Agricultural Economy

Farmers make more money when they become more efficient, they expand, or their terms of trade improve. Two of these three have been working for farmers over the decades, and one against. Advances in technology and changes in the structure of agriculture have been increasing yields of crops and livestock. While total inputs to agriculture are little changed from year to year, at least since World War II, there are fewer farmers, so farms get larger. But the level of prices received relative to prices paid (parity ratio) has been trending downward over the years. Let's talk about this long-term price trend.

When farm income gets pinched, as it did from lost export markets and financial stress during the early 1980's, people often blame the cost-price squeeze, and with some reason. In 1973, when real income for the farm sector was at an all-time high, prices received relative to prices paid were 91 percent of parity. In 1983, when real farm income had plummeted to its lowest level since before World War II, prices had fallen to 56 percent of parity. This decline was used to support a call for measures to increase prices received by farmers, although such calls neglect the effects of advancing technology and farm growth on farmers' profits.

Attempts to improve prices go against the long-run trend. Prices received relative to prices paid have been falling for decades. The 1973-83 fall was from prices which had run up during the world food crises in the early

1970's. Over the longer term, the downdrift in the parity ratio has been persistent, except for periods of war, depression, and crisis, since the 1910-14 base period. Yet through larger farms and higher productivity, incomes can be maintained or improved anyway, once problems with exports and credit are solved. Most of today's farm output originates on the half-million largest and most efficient farms, which earn higher incomes even with prices below 50 percent of parity.

To gain a long-run perspective on price trends in agriculture, let's follow the price history of a single commodity—wheat—since 1800. The accompanying chart shows the price of wheat adjusted for inflation, with the Consumer Price Index used as the deflator.

One can read into the price history many important economic events: rising prices reflect growth in domestic and export demand from the beginning of the 19th century up to the Civil War, capped by prices reflecting food shortages during that war. From then on—for more than a century—U.S. agriculture has shown a capacity to grow faster than its markets, and the trend in real wheat prices has been downward, with cycles from wars and depressions.

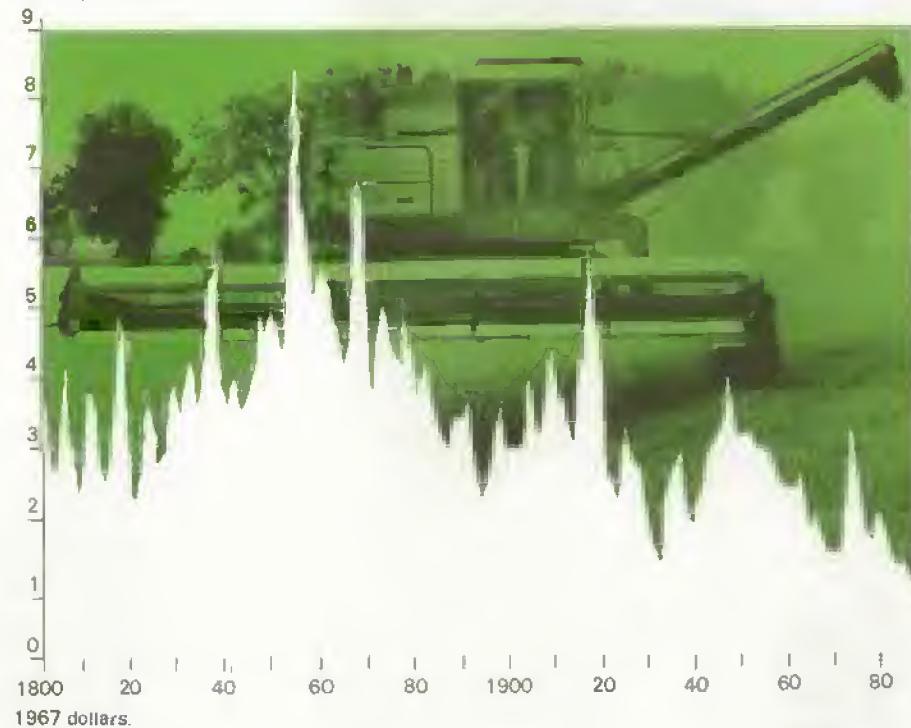
The agricultural depression of the 1920's, following World War I, is discernible in the chart, as is the further downward pressure on price during the Great Depression of the 1930's. The World War II peak was well below that of World War I, which, in turn, was well below the Civil War peak. The real price fell from its World War II high throughout most of the 1950's and 1960's: there was a gradual down-trend in the nominal price and inflation picked up, particularly since 1965.

It is also apparent that prices received by farmers were less volatile during the 1950's and 1960's than before or since. The 1950's were years of massive Government programs, which boosted the domestic price above the world price and supported farm income. One effect of these programs was to reduce price fluctuation. The down-trend during the 1950's and 1960's reflects policy adjustments to work off accumulated stocks of wheat that had not cleared the market at the supported price, and it reflects accommodation of policy to domestic prices above downward-trending world prices.

Exposure of the domestic price to world trade during the world food crisis of the 1970's drove wheat prices to an historic high and reintroduced wide annual fluctuations. Even so, the real

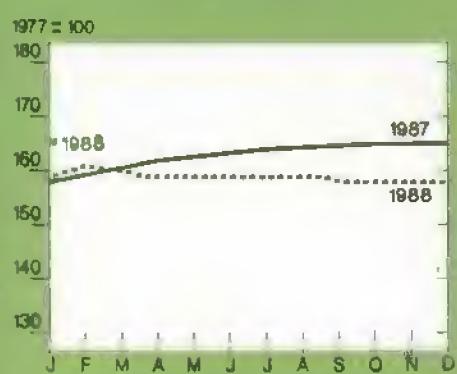
### Real Wheat Price Is Trending Downward

Dollars per bushel

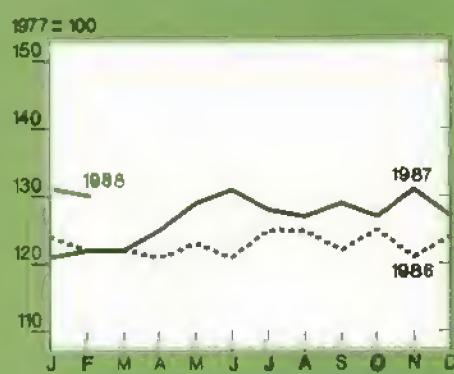


# Prime Indicators of the U.S. Agricultural Economy

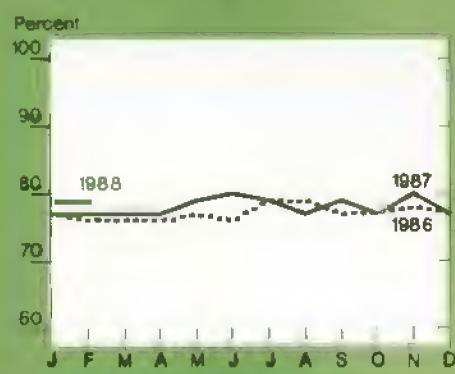
Index of prices paid by farmers<sup>1</sup>



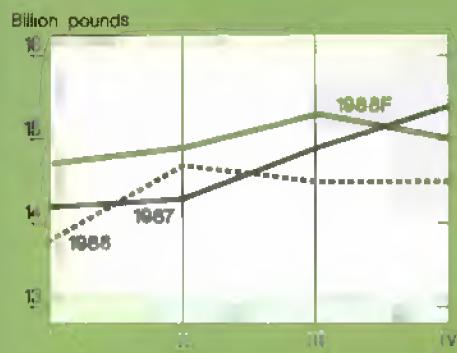
Index of prices received by farmers<sup>2</sup>



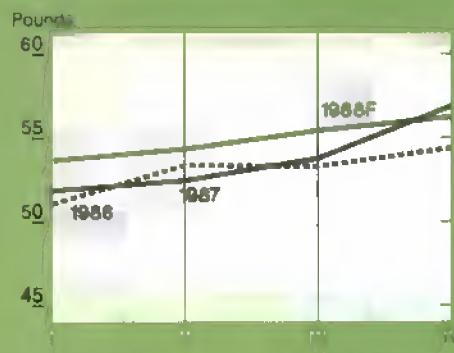
Ratio of prices received to prices paid



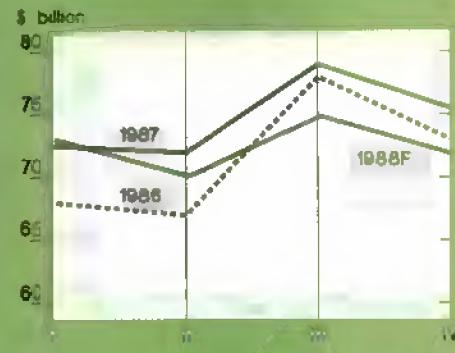
Red meat & poultry<sup>3</sup> production



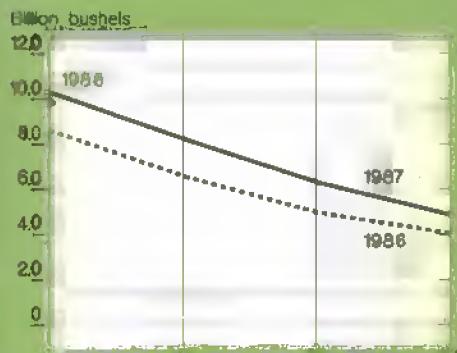
Red meat & poultry consumption, per capita<sup>3,4</sup>



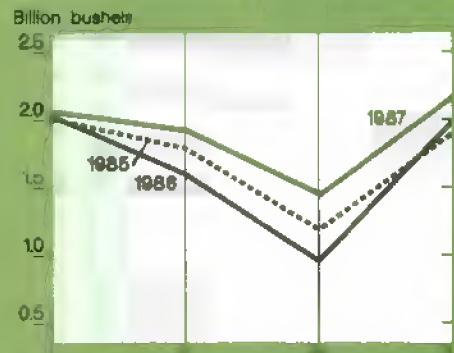
Cash receipts from livestock & products<sup>5</sup>



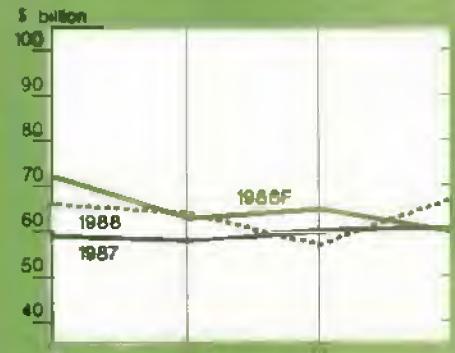
Corn beginning stocks<sup>6</sup>



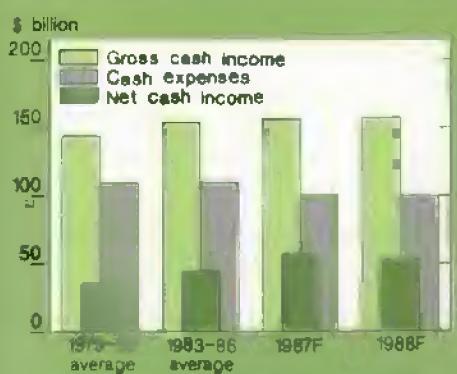
Corn disappearance<sup>6</sup>



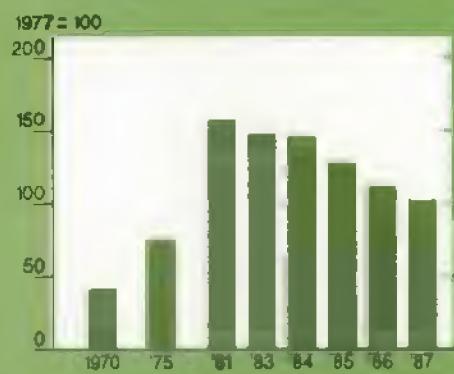
Cash receipts from crops<sup>5</sup>



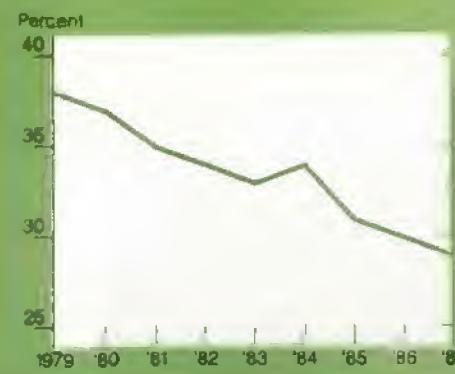
Farm net cash income



Farm real estate values



Farm value/retail food costs



<sup>1</sup>For commodities and services. Interest, taxes, and wages. Beginning in 1986, data are only available quarterly. <sup>2</sup>For all farm products.

<sup>3</sup>Calendar quarters. Future quarters are forecasts for livestock, corn, and cash receipts. <sup>4</sup>Retail weight. <sup>5</sup>Seasonally adjusted annual rate.

price of wheat during the 1973 peak was below the World War II peak.

The price drop in 1986 reflects programs under the 1985 Farm Act which lowered loan rates, allowing lower market prices to induce more domestic and export use, while maintaining farm income through payments for the deficiency between the target price and the higher of the loan rate and the market price.

The price is edging up a little this year. Even so, the real price of wheat is well below what it was at the depth of the depressed 1930's, and the lowest it has been since Revolutionary times. At the same time, wheat yield per acre now is about three times what it was in the 1930's, and the wheat acreage per farm growing wheat is ten times what it was.

Can one generalize from trends in the price received by farmers for wheat to prices for other commodities, or to the prices consumers pay for food? Wheat is an important staple in the world food supply, and it is a substitute for other foods as well as for livestock feed.

The relation of farm-level wheat prices to consumer food costs is weak. Wheat accounts for a small percentage of total food outlays; it even accounts for a small percentage of retail outlays for products that include wheat.

Given the trend toward increased value added to wheat products in the form of transportation, processing, packaging, and other services, the margin is rising between the price received by farmers for wheat and retail prices of wheat products. Therefore, a stable consumer price is consistent with a decreasing wheat price. Even so, wars, depressions, and food crises are reflected in the price of wheat; and the price of wheat may be a useful proxy for long-run farm and food price trends.

If the price of wheat deflated by the Consumer Price Index is a useful proxy for real farm and food prices, then those who think prices received will rise relative to prices paid in coming decades, either from economic forces or from Government intervention, are calling for a fundamental change in the long-run trend. It would appear more reasonable to expect farmers (and help them when necessary) to continue to find ways to make a living in the face of a prospective

long-run cost price squeeze, as they have done for the last century. [Clark Edwards (202) 786-3313]

## LIVESTOCK OVERVIEW

### *Hog Prices Fall From February Highs*

After hovering in the low \$40's for 10 weeks, barrow and gilt prices strengthened considerably in late January and early February. This seasonal strength, which developed later than usual, was generated by a modest improvement in carcass cutout values and a sharp reduction in packer margins. By mid-February the weekly average price of barrows and gilts at the 7 major markets reached \$49 per cwt. Hog prices dropped into the mid to low \$40's per cwt in late February and early March, as kills increased seasonally and wholesale prices weakened.

Between early December and mid-February, weekly slaughter declined about 20 percent. As slaughter diminished, bids for pork loins and other fresh pork cuts improved, offsetting a sharp post-holiday slump in ham prices. Extended severe weather interrupted movement of live hogs and pork products, and the spread between live hog prices and carcass cutout values narrowed substantially as marketings slowed. However, hog prices fell as marketings increased in late February and early March.

The futures market adopted a bullish posture following the release of the December *Hogs and Pigs* report, giving hog producers a chance to hedge or forward contract future production at profitable levels. In addition, hog prices thus far in 1988 have been above earlier expectations. If the optimistic attitude persists through spring, hog producers—who have thus far maintained positive returns—may be encouraged to increase their farrowing intentions.

Total U.S. imports of pork were 1,195 million pounds (carcass weight) in 1987, up 7 percent. Imports from Canada, the largest supplier, were up 13 percent to 546 million pounds. Denmark, the second largest supplier, exported 6 percent less pork in 1987 than in 1986, due largely to the strengthening krone. Imports from Canada will increase in 1988; Canadian production is expected to increase

about 9 percent. In 1988, U.S. pork imports may total 1.3 billion pounds.

U.S. live hog imports from Canada were 445,863 head in 1987, down 11 percent from 1986. The deposit rate for the countervailing duty on live hogs was Can\$4.386 per cwt. Live hog imports in 1988 may total 425,000 to 475,000 head.

### *Milk Production is Up From DTP-Reduced Levels*

Milk production in 1987 totaled 142.5 billion pounds, down less than 1 percent from both 1985 and 1986. Early 1987 production was 3 percent below a year earlier because of the Dairy Termination Program (DTP). By the last quarter of 1987, milk production was 3 percent larger than the DTP-reduced level of a year earlier.

Milk per cow rose 4 percent in 1987, the sharpest increase in a decade. Output per cow strengthened throughout 1987 in response to record milk-feed price ratios. Output gains surged to more than 5 percent from a year earlier during October-December.

Except for reductions under the DTP, there has been little change in milk cow numbers during the last 2 years. By late 1987, non-DTP producers had about the same number of cows as in early 1986, even though 1987 returns over concentrate costs were down to 1985 levels. The possibility of support price reductions during 1988-90 may have encouraged producers to use 1987 returns to improve their financial position rather than expand. Higher slaughter cow prices and a smaller herd of replacement heifers may have helped stem growth in milk cow numbers.

The DTP did not dramatically alter regional shares of milk production. During 1985-87, the Southern Plains and Pacific regions increased output 6 percent, while the Mountain region was unchanged. Each of these regions had above-average participation in the DTP. All other regions posted declines of 1-3 percent, even though DTP sign-up varied from 5 to 17 percent.

### *Cattle Inventory Lowest In 27 Years*

For the first time since 1961, the January 1 cattle inventory dropped below 100 million head. The 3-percent drop from January 1, 1987 marks the sixth consecutive year of decline. Beef cow inventories fell 2 percent during the

## Production of Livestock and Products

### Commercial beef production

Mil. lb.

1400

2200

2000

1800

1600

1400

1200

1000

800

600

400

200

0

### Broiler slaughter<sup>1</sup>

Mil. lb.

1400

1200

1000

800

600

400

200

0

### Egg production

Mil. dozen

520

400

280

160

40

### Commercial pork production

Mil. lb.

1500

1350

1200

1050

900

### Turkey slaughter<sup>1</sup>

Mil. lb.

400

300

200

100

### Milk production

Bil. lb.

14

13

12

11

10

<sup>1</sup>Federally inspected slaughter, certified

past year because of less heifer retention for brood cow herds. Higher yearling cattle prices likely encouraged some producers to sell heifers to pay debts. Average returns per cow above cash costs reached \$61 in 1987, compared with \$25 in 1986 and negative returns from 1981 to 1985. Thus, the opportunity to reduce debts appears to have overshadowed expansion plans.

The January 1 survey indicates possible future growth in beef cow herds. Yearling heifers held for beef herd replacements on January 1, 1988 were about unchanged from 1987, and were sharply higher in some major beef cow States. If a larger heifer retention rate occurs, another 1 million cattle are expected to be pulled from the feeder cattle pool during the second

half of 1988. Supplies of lightweight feeder cattle outside feedlots and available for stocker operations and feedlot placement already are down from a year ago.

January 1 supplies of lighter weight calves were down 10 percent, while yearlings were about unchanged. The smaller calf supply will reduce marketings and support prices during the second half of 1988 and into 1989.

Yearling cattle prices at Kansas City are expected to average in the high \$70's to low \$80's per cwt this spring, as supplies remain seasonally tight. As the demand for grass cattle is satisfied, prices could weaken somewhat, but not below the high \$70's. Contin-

ued price strength into the summer quarter will depend on the profitability of fed cattle during the next several months. Feedlot profits turned negative in December as the higher priced feeder cattle placed on feed last summer and fall were marketed.

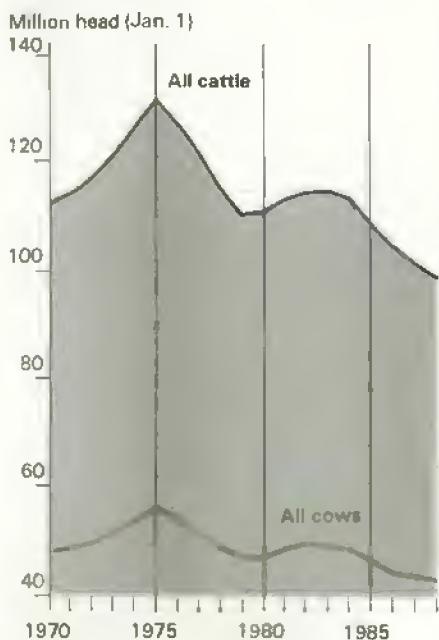
Losses during January and February were estimated at \$.32 and \$1.06 per cwt, respectively. Favorable returns during most of 1987 have given feedlots a cushion to absorb lower profits over the next several months. However, an extended run of negative returns will reduce the demand for relatively high-priced feeder cattle and drive stocker cattle prices lower. Recent prices have been seasonally strong as poor weather held down supplies of meat, particularly beef.

Slaughter rates are expected to increase over the next several months, pressuring retail meat prices.

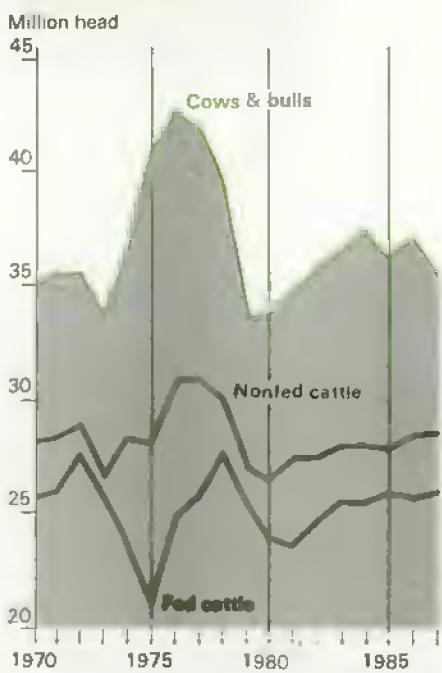
### Beef Production To Decline in 1988

Smaller fed cattle supplies and expected declines in both cow and nonfed steer and heifer slaughter could drop beef production another 4 to 5 percent in 1988 from a year earlier. As in

#### Cattle Inventory Drops Below 100 Million Head



#### Commercial Cattle Slaughter Down Nearly 5 Percent



1987, most of the decline will come from processing beef. Fed cattle marketings could decline only 1 percent this year, while grass-fed slaughter may drop 13 percent. Some reduction in live and dressed weights is expected, although weights for all classes of cattle will remain near the record highs of 1987.

Price strength for fed cattle beyond the levels expected this spring—perhaps peaking in the high \$60's to low \$70's—will be hampered by record supplies of competing meats. Total red meat and poultry consumption is expected to increase about 5 pounds per capita in 1988.

Larger supplies are expected to put downward pressure on prices for all meats, including beef. For the year, fed cattle prices should average \$1 to \$2 above the \$65 average for Omaha Choice steers in 1987. Tight nonfed beef supplies will support cow prices throughout the year, with utility cows at Omaha averaging near \$46, about \$1 above 1987.

### Sheep and Lamb Inventory Up, More Lambs on Feed

The inventory of all sheep and lambs on January 1, 1988 increased 4 percent from a year earlier. This was the second year of expansion following several years of profitability. The West showed the biggest increases in the ewe flock—about 6 percent above a year ago. In the Great Plains, sheep inventories increased a little over 2 percent from a year ago. Most of this expansion occurred outside of Texas, which has the largest inventory of any State.

A surprise came with the inventory east of the Rocky Mountains, where ewe numbers dropped about 4 percent in the North Central region and were only 2 percent above 1986. The Southeast was down 5 percent on January 1, 1988, after a 12-percent increase a year earlier. The decline in the eastern regions was not substantial enough to offset increased numbers elsewhere, since the West and the Great Plains made up 82 percent of the ewe lambs 1 year old and older on January 1, 1988.

New-crop lambs were even with a year ago, while lambs on feed were up 18 percent on January 1, 1988. These supplies should be available during the first half of the year, and could push production up about 6 percent. First-quarter production could show

the largest year-to-year increase at around 80 million pounds. Much of this shift is attributed to the religious holidays, which occur early in April this year. Second-quarter production is expected to drop to around 78 million pounds.

### Broiler Prices Down and Feed Costs Up

Broiler production during 1988 is forecast to increase 5 percent. The rate will slow as producers react to negative returns during late 1987 and early 1988. Feed costs were higher from November 1987 through January 1988 than a year earlier. Producers have had negative returns on fresh whole fryers since December 1987. Although soymeal costs have fallen from December highs, corn and soymeal costs are expected to remain above first-half 1987. Net returns are expected to remain negative or near breakeven during most of 1988.

Monthly hatch data for November 1987 through January 1988 indicate first-quarter production may be 7 percent larger than a year earlier. Average slaughter weights during fourth-quarter 1987 were a little more than 1 percent above the same period in 1986, continuing a trend towards higher weights. Weekly chick placements during February, an indicator of April slaughter, were about 3 percent above a year ago. Second-quarter production is projected to be 7 percent above a year earlier.

The hatching egg flock in January, predominantly broiler-egg layers, was 6 percent larger than a year ago. An indicator of November 1988 slaughter, the estimated broiler hatchery supply flock for August, is no greater in 1988 than 1987.

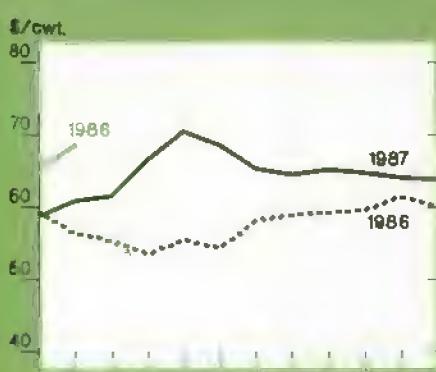
The 12-city wholesale composite broiler price was 44 cents per pound in February, down from 50 cents a year ago. With production continuing to increase above trend, prices during first-quarter 1988 are expected to average in the 44-45 cent range. Prices may rise slightly during the second and third quarters, averaging in the 42-48 cent range owing to seasonal activities such as barbecuing. The average price for 1988 is expected to be in the 41-47 cent range.

### Turkey Stocks and Production Higher, Returns Lower

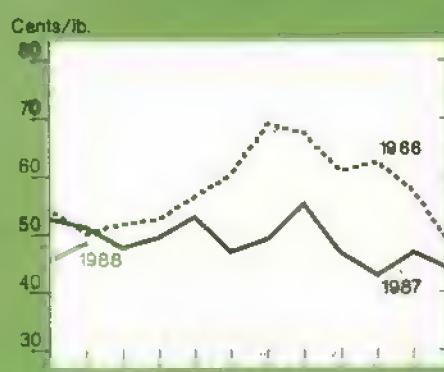
Turkey production during 1988 is expected to be 10 percent greater than

## Commodity Market Prices

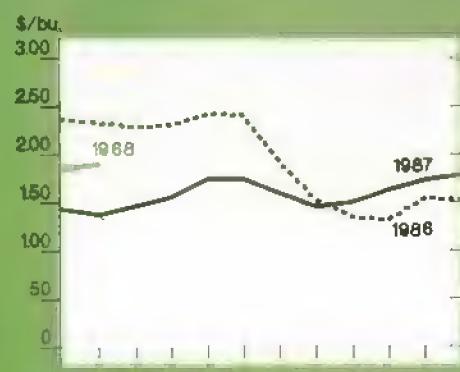
Choice steers, Omaha



Broilers, 12-city average



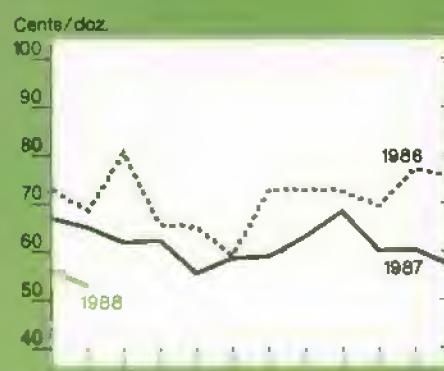
Corn, Chicago<sup>3</sup>



Feeder cattle, Kansas City<sup>1</sup>



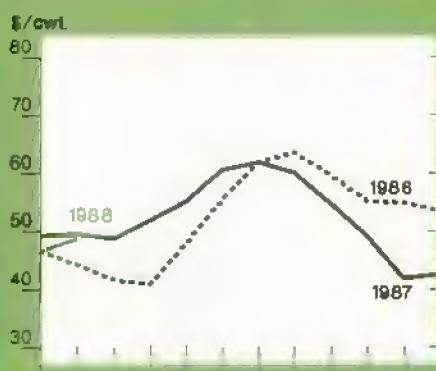
Eggs, New York<sup>2</sup>



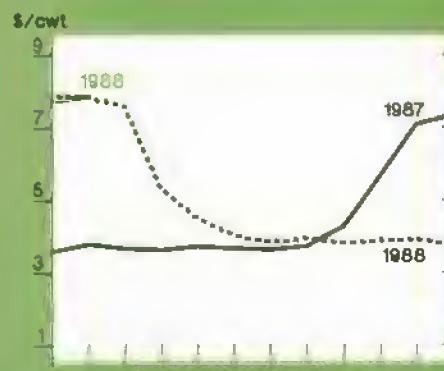
Soybeans, Chicago<sup>4</sup>



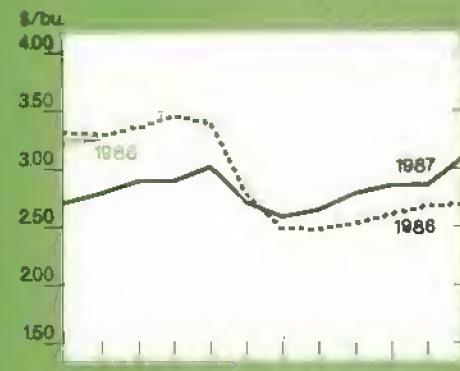
Barrows and gilts, 7 markets



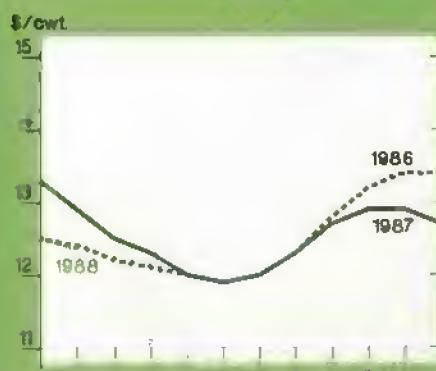
Rice (rough), SW Louisiana



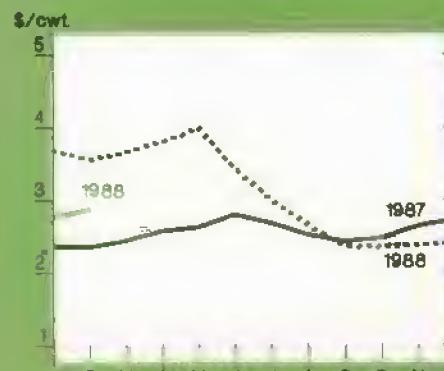
Wheat, Kansas City<sup>5</sup>



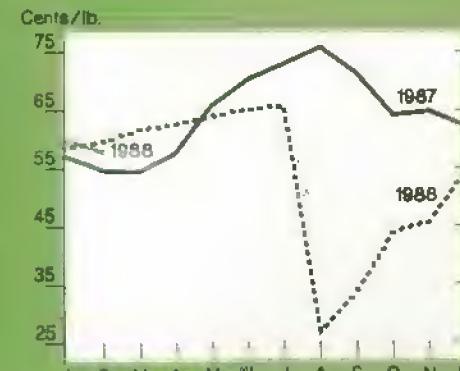
All milk



Sorghum, Kansas City



Cotton, average spot market



1600-700 lbs., medium no. 2

2Grade A Large

3No. 1 Yellow

4No. 2 Yellow

5No. 1 HRW

1987. The increase is forecast to slow from 1987's 18 percent as producers react to negative returns. Losses during the first quarter may reach as much as 12 cents per pound. Fourth-quarter 1987 net returns were near breakeven.

Poults placed for slaughter in the first quarter of 1988 were 19 percent ahead of a year ago, indicating little slowing in production from first-quarter 1987. Placements of poult in January were only 6 percent above a year ago. Cumulative placements for 1988 production to date were 14 percent above a year ago.

Turkey stocks, at 320 million pounds for February 1, were approximately 61 percent greater than a year earlier. The higher stocks and production are putting considerable pressure on prices. Turkey part stocks, as a share of total turkey stocks, grew until 1985 when they reached 50 percent. A portion of turkey parts are used in further processing. At the beginning of 1988, they were down to a 41-percent share, similar to 1987.

Wholesale prices for eastern region hen turkeys during 1988 are expected to average in the 50-56 cent range. First-quarter 1988 average prices are predicted to be in the 48-50 cent range. The February price of 47 cents was substantially below the 58 cents of a year earlier. Turkey prices are expected to rise seasonally towards breakeven during the third and fourth quarters, although limited by ample supplies of chicken and pork.

#### *Laying Flock is Smaller, Eggs Per Layer Increasing*

Egg production is expected to fall less than 1 percent during 1988. That will translate to a 5-egg reduction in per capita consumption, a drop of 2 percent from 260 eggs in 1987. Production is forecast to fall below year-earlier levels during the second quarter, primarily because of negative net returns. After losing nearly 4 cents per dozen in the last quarter of 1987, producers are expected to lose another 7 cents during first-quarter 1988.

The U.S. flock during January was slightly smaller than a year ago. The flock is slightly older this year than last; 20.4 percent have completed a molt compared with 19.1 a year ago. Slaughter of light-type hens increased considerably from November 1987 through February 1988, indicating producers' desire to have a younger,

more efficient flock. Eggs per 100 layers were 68.2 on February 1, 2 percent above a year ago. First-quarter egg production is forecast to be a half-percent greater than a year earlier.

New York wholesale grade A large egg prices are forecast to average in the 57-63 cent per pound range during 1988, somewhat below the 62-cent average in 1987. Prices may average in the 55-56 cent range for the first quarter of 1988. Egg prices in February were 53 cents, down considerably from the 65 cents of a year earlier. Second-quarter average prices are expected to remain about the same as the first quarter. Average prices are projected to rise during the second half of 1988, due to seasonally heavier baking demand for fourth-quarter holidays.

**For further information contact:**  
Kevin Bost, hogs; Mark Weimar,  
broilers, turkeys, and eggs; Steve  
Reed, cattle; and Jim Miller, dairy.  
All are at (202) 786-1285.

#### **FIELD CROP OVERVIEW**

World crop production in 1987/88 is down from last year, while consumption is up. Stocks of all major commodities are down and prices are higher. Stock levels have been large for several years, but world stocks-to-use ratios have fallen. With the exception of coarse grains, the ratios are now close to or even slightly below their 10-year average. However, stocks of corn remain relatively large.

Most price gains this year have been modest. By mid-February, world market prices for most commodities were above a year earlier, but low by historical standards.

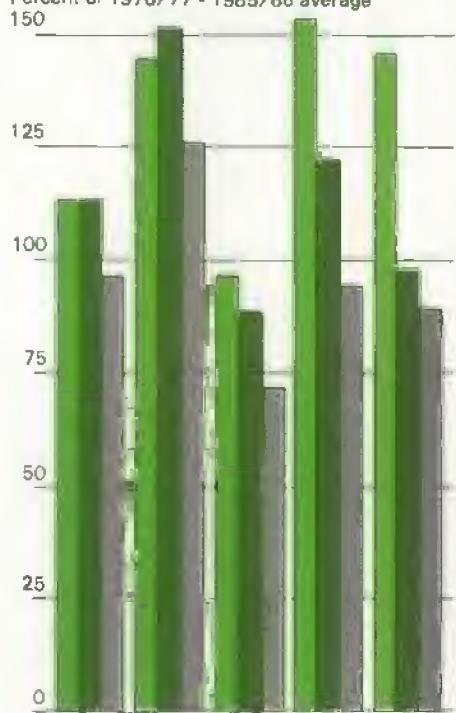
Higher world consumption, lower foreign production, and continued relatively low prices have contributed to larger world trade. Cotton and rice are the major exceptions, but cotton trade has slipped only slightly and remains close to last year's record. U.S. exports are up again; shipments are benefiting from both the larger volume of world trade and a bigger U.S. market share.

#### *Wheat and Rice Supplies Tighter*

World production totals for wheat and rice are down 5 percent each in 1987/88. Rice production is off because of smaller U.S. and foreign crops, wheat production because of a

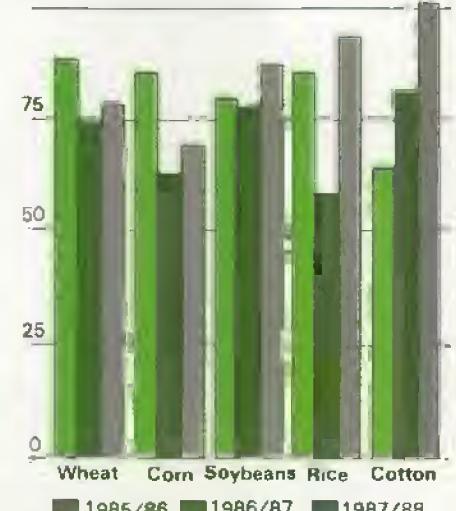
#### **World Stocks Are Down...**

Percent of 1976/77 - 1985/86 average



...While Export Prices Are Up<sup>A</sup>

100



\*Stock-to-use ratios.

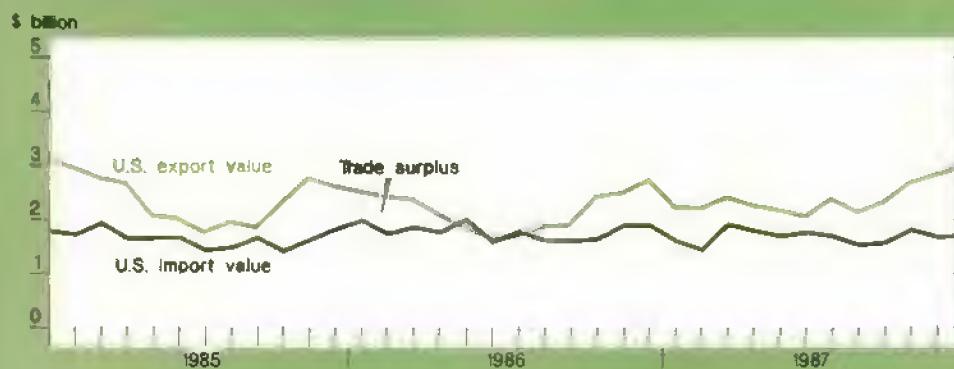
<sup>A</sup>Prices through February 1988

smaller foreign crop. With wheat consumption rising, world wheat carryout is expected to fall 17 million tons to 151 million. U.S. ending stocks are also down sharply, showing the largest 1-year change on record. World rice ending stocks are expected to be the smallest since 1976/77.

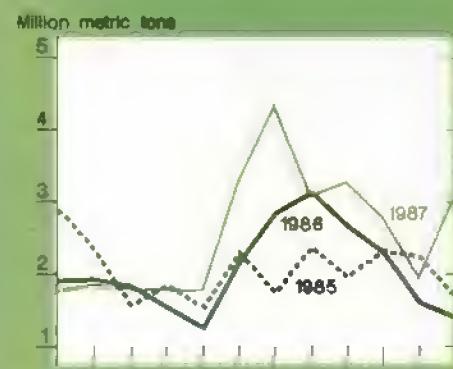
Since Thailand and the United States, the world's largest rice exporters, have smaller long-grain supplies, world prices are up sharply. Rice trade is expected to be down 17 percent in calendar 1988.

# U.S. Agricultural Trade Indicators

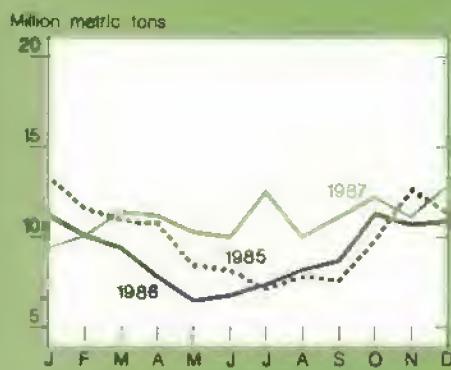
## U.S. agricultural trade balance



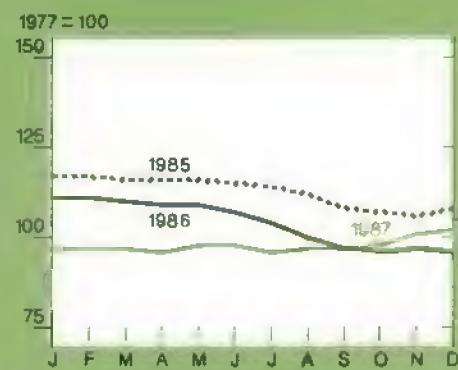
## U.S. wheat exports



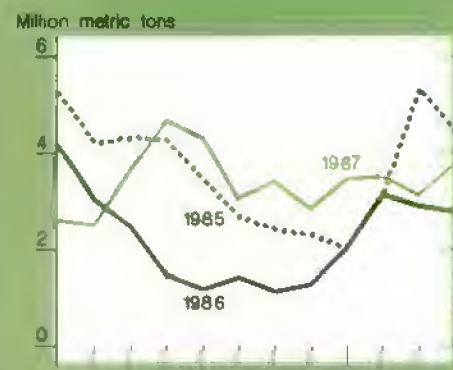
## Export volume



## Index of export prices



## U.S. corn exports



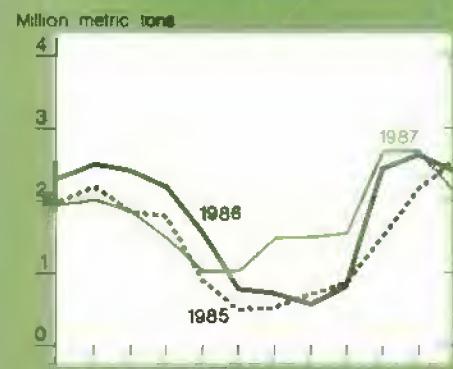
## Foreign supply & use of coarse grains



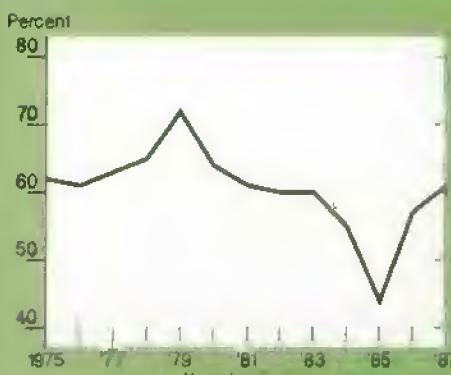
## Foreign supply & use of soybeans



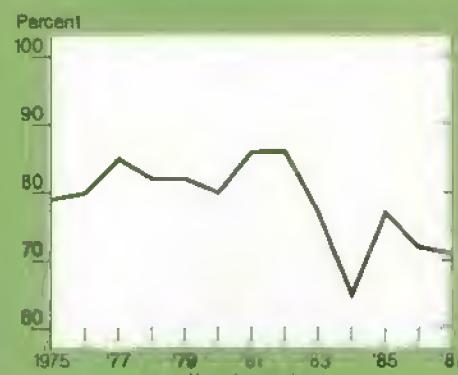
## U.S. soybean exports



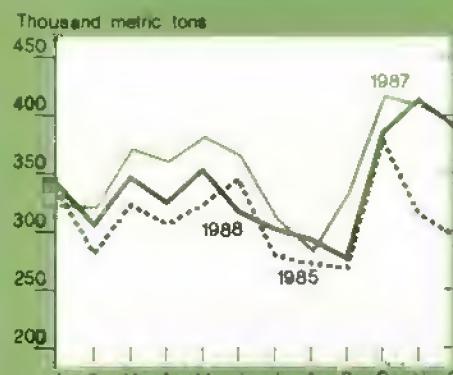
## U.S. share of world coarse grains exports<sup>1</sup>



## U.S. share of world soybean exports



## U.S. fruit & vegetable exports<sup>3</sup>



<sup>1</sup>Excluding intra-EC trade

<sup>2</sup>October-September years

<sup>3</sup>Includes fruit juices.

Wheat prices, although higher than last year, have registered smaller increases than rice, and the volume of world wheat trade has risen substantially. Total trade (excluding intra-EC shipments) is expected to be 103 million tons, 12 million above last year and only 4 million below the 1984/85 peak. U.S. export programs have played a role in this expansion, and are the major reason behind the 13.5-million-ton increase in U.S. wheat exports expected this year.

#### ***Wheat Stocks Tighten; Prices Will Be Higher***

With use greater than production in 1987/88, U.S. wheat stocks have become a critical source of available supply. However, 80 percent of the 1987/88 beginning stocks were isolated from the market in the Farmer-Owned Reserve (FOR) or in Commodity Credit Corporation (CCC) inventory. To make more stocks available to the market, an auction was established in November 1987, exchanging wheat for generic certificates (see box on "Generic Certificate Update").

Wheat prices received by producers began 1987/88 under pressure from large harvest supplies. During June, July, and August, prices averaged \$2.37 per bushel, about 10 percent lower than January-May 1987. However, with stronger demand and lower stocks, prices have steadily increased, reaching \$2.83 per bushel in February 1988.

The season-average market price for all wheat in 1987/88 is forecast at \$2.55-\$2.65 per bushel. This implies that prices will average near or above \$2.80 for the remainder of the year. Strong export demand is supporting prices, but auctions of CCC inventories are providing additional supplies. Transportation bottlenecks are limiting price increases received by farmers, as the shortage of rail cars is reducing wheat movement in some areas.

#### ***Wheat Supply and Demand To Stay About the Same***

Based on 1-percent-lower winter wheat seedings, total wheat area in 1988 is likely to be slightly below a year earlier. Assuming trend yields, production may about equal 1987.

A 30-percent decline forecast for 1988/89 beginning stocks means total supplies likely will be down substantially from 1987/88. Domestic demand

may be about the same as in 1987/88. Little change is expected in demand for feed wheat because prices favor other feeds, but there will be continued growth in food use. Even if total use falls well short of the 1987/88 record, consumption will likely exceed production, resulting in another year of declining stocks.

World feed grain production is expected to be down 5 percent this year, and use will exceed production for the first time since 1983/84. However, stocks remain large in relation to use. World coarse grain trade is expanding only modestly this year, but U.S. exports are expected to rise by 10 percent as the U.S. trade share climbs to 61 percent. Corn and sorghum trade is increasing, but world barley trade is dropping slightly this year (see Commodity Spotlight on barley).

#### ***Changes in Feed Grain Program Could Reduce Participation***

The 1988 feed grain program contains a few changes from 1987. The target prices and loan rates are lower; the diversion percentage and payment rates are lower for the voluntary paid land diversion (PLD) program; and farmers are provided an optional 0/92 program for 1988.

Oats are singled out for special treatment. The acreage reduction program (ARP) requires 5 percent for oats, compared with 20 percent for other feed grains. The PLD is not available to oat producers, and limited cross-compliance restrictions are lifted.

The expected net gain to producers for participating in the ARP is high, but considerably less than it appeared to be at signup for the 1987 program. Also, the PLD's benefit is decreased by a lower payment rate. Consequently, ARP participation may drop slightly, and PLD participation could drop significantly.

#### ***Demand For Feed Grains Growing***

Feed use is forecast up this year, with the largest increase in the first half. Although dairy and beef cow numbers are down, milk output per cow is up, so feed use in dairying may be little changed. Hog, poultry, and cattle feeding, all heavy grain-using enterprises, are increasing.

#### ***Generic Certificate Update***

USDA issued \$15.6 billion of generic certificates from April 1986 through January 31, 1988, including \$12.5 billion as deficiency and diversion payments. Over \$1.3 billion were 5-month deficiency payments for the 1987 wheat, barley, and oats crops.

Generic certificate exchanges through February 16, 1988 totaled more than \$13.2 billion. With approximately \$1.2 billion in certificates mailed out in February to wheat, upland cotton, and rice producers, near-term certificate availability is estimated at \$3 billion.

Since December 1, 1987, generic certificates have generally traded at 3.5 to 4.5 percent above face value, reflecting rising corn and wheat prices and reduced opportunities for PIK-and-roll (exchanging certificates for crops placed as loan collateral in order to avoid storage and interest charges). Certificate premiums for September-November averaged slightly higher, at 5.5 percent above face value.

#### ***Certificate Exchanges Continue Strong***

Despite reduced PIK-and-roll opportunities for corn compared with the previous quarter, certificate exchanges continued heavy over the last quarter (December 1, 1987, through February 16, 1988). Quarterly exchanges exceeded \$2.75 billion, about the same as the quarter before. However, the pattern of exchanges shifted toward wheat and crops owned by the CCC.

Of the generic certificates exchanged since April 1986, roughly 72 percent have been for corn and 20 percent for wheat. Over the current quarter, corn exchanges have fallen to 63 percent (\$1.74 billion) while wheat exchanges are over 27 percent (\$755 million).

Of those certificates exchanged for corn since December 1, 14 percent have been for corn owned by the CCC, while 85 percent have been for corn held as loan collateral. This contrasts with a year earlier (December 1986-February 1987), when PIK-and-roll opportunities made it more advantageous for corn producers to redeem loan collateral with certificates. In that quarter, over 98 percent of corn certificate exchanges were for crops held as loan collateral.

Of current quarterly wheat exchanges, 84 percent have been for CCC-owned wheat. This contrasts sharply with previous quarters, where the majority of exchanges were for wheat held as loan collateral. The shift reflects the impact of the weekly CCC wheat auctions.

#### Auctions Free Up CCC Wheat Stocks

From November 6 through March 15, about 330 million bushels of CCC wheat were auctioned. Since the CCC began the certificate auction in November 1987, weekly sales have averaged 17 million bushels.

As of February 29, the CCC began holding three auctions weekly, with target exchanges of 10 million each. Two auctions per week will include new stocks, while one will be restricted to old stocks. The CCC has planned to hold three auctions per week at least through March 25. A new wheat catalog was released February 16 and became eligible for the auctions on March 2.

An additional 165 million bushels of wheat likely will be needed from CCC stocks before June 1. This implies a weekly auction of 13 million bushels. However, looking forward to the 1988/89 crop, additional CCC stocks could be auctioned if expected use exceeds available free supplies, as it did during 1987/88.

#### Auctions Will Affect Wheat CCC Ending Stocks

January 1 carryin of CCC wheat is estimated at 668 million bushels. CCC wheat auctioned from January through March 11 totaled 199 million bushels, reducing March 1 stocks to

#### Projected Ending Stocks for CCC Wheat

	million bu.
Jan. 1 carryin	668

Auctions (through Mar. 11)	million bu.
	-199

Subtotal	469
----------	-----

Alternatives for June 1 ending stocks if weekly auctions average:

10 mil. bu./week	359
13 mil. bu./week	326
15 mil. bu./week	304
20 mil. bu./week	249

approximately 469 million. On January 29, USDA announced that no existing loans under the wheat special producer storage loan program (SPSLP) would be extended, and that the wheat pledged as collateral for these loans could not enter the FOR. Additionally, 1983 and prior-crop wheat FOR loans which mature after March 1 will not be extended.

Weekly wheat auctions of 10 million bushels could reduce June 1 ending stocks to 359 million bushels. If wheat auctions averaged over 20 million bushels per week, June 1 stocks could dip as low as 249 million. Commitments to the Food Security Reserve include 147 million bushels of CCC wheat. [Joseph Glauber (202) 786-1840]

#### Crop-Year Quarterly Exchange Patterns

Quarter	Share of value of corn exchanges from:		Share of value of wheat exchanges from:		Share of value of all commodity exchanges from:	
	CCC	Loans	CCC	Loans	Corn	Wheat
-- Percent --						
Mar.-May 1986	7.8	92.2	42.2	57.8	48.1	30.0
July-Aug. 1986	18.5	81.5	41.0	59.0	55.6	25.3
Sept.-Nov. 1986	6.0	94.0	4.7	95.3	64.1	25.2
Dec.-Feb. 1987	1.7	98.3	12.3	87.7	80.2	11.3
Mar.-May 1987	2.7	97.3	47.4	52.6	76.6	17.9
June-Aug. 1987	8.8	91.2	48.7	51.3	81.4	12.4
Sept.-Nov. 1987	3.9	96.1	33.7	66.3	72.7	17.9
Dec.-Feb. 1988*	14.8	85.2	84.1	15.9	63.2	27.4

\*Reflects exchanges through February 16, 1988.

#### Cumulative Generic Certificate Exchanges as of February 16, 1988

Commodity 1/	CCC inventory	Producer loans	Total
<b>Food grains</b>			
<b>Wheat</b>			
Volume (mil. bu.)	509.4	524.6	1,034.0
Value (mil. \$)	1,285.3	1,323.7	2,609.1
<b>Rice</b>			
Volume (mil. cwt.)	41.7	0.3	42.0
Value (mil. \$)	150.4	1.2	151.5
<b>Feed grains</b>			
<b>Corn</b>			
Volume (mil. bu.)	376.7	5,453.4	5,830.1
Value (mil. \$)	612.0	8,858.4	9,470.4
<b>Grain sorghum</b>			
Volume (mil. bu.)	77.4	376.6	454.0
Value (mil. \$)	126.2	613.6	739.7
<b>Barley</b>			
Volume (mil. bu.)	65.6	101.8	167.4
Value (mil. \$)	91.7	142.2	233.8
<b>Cotton</b>			
Volume (mil. bales)	.88	\$ 93	6.81
<b>Rye, oats, soybeans</b>			
Value (mil. \$)	11.7	29.7	41.4
<b>TOTAL VALUE (mil. \$) 2/</b>	<b>2,277.2</b>	<b>10,968.7</b>	<b>13,245.9</b>

1/ Other program commodities, for which few or no exchanges have been made, include honey, nonfat dry milk, butter, and cheese.

2/ Does not include values for cotton exchanges.

Source: Agricultural Stabilization and Conservation Service, USDA.

Food and industrial use of corn is expected to grow 3 to 4 percent this season, in contrast to an annual average growth of 11 percent from 1981/82 through 1985/86. High fructose corn syrups have about achieved maximum market penetration, and increases in use are now reflecting growth of the product markets in which they are used.

Use of other corn sweeteners (glucose and dextrose) and dry-milled products has grown little in recent years. Ethanol sales for the past 2 years appear to be limited seasonally by wet-milling capacity; a larger share of capacity has been shifted to higher-profit-margin HFCS production in the summer.

A key factor in this year's stronger corn and sorghum prices is the commitment of a larger share of the 1987/88 supply to CCC inventory, FOR, regular CCC crop loans, and shrinking uncommitted stocks. Corn prices have been edging upward in expectation that cash redemptions from loans will be necessary to meet market needs. Corn prices received by farmers are expected to average \$1.65 to \$1.85 a bushel, up from \$1.50 in 1986/87.

Barley supplies are down 8 percent because of a 14-percent drop in production. Barley exports for June-December were 79.2 million bushels, 6 million ahead of the year-earlier pace. Exports for the remainder of the year will depend largely on EEP sales. Barley feeding is expected to be down this year because feed barley prices are high relative to corn.

The supply of oats is expected to total 542 million bushels, 10 percent below last year and 26 percent below the 1985/86 supply. Farm prices have averaged 40 cents a bushel above a year earlier. Oat feeding, which accounted for about 84 percent of total use in 1986/87, is expected to be down 12 percent.

#### **Cotton Prices Fall As Supplies Ease**

World stocks of cotton are expected to fall 10 percent to 29 million bales at the end of 1987/88, and stocks as a proportion of world use likely will be the lowest since 1983/84. Despite this, world prices, as measured by the price of cotton in Northern Europe (the "A" Index), have been dropping since their August peak and are now close to

prices a year ago. The exceptionally large U.S. crop and continued upward revision of foreign crop estimates are factors in the price decline.

Foreign cotton production is expected to total 64 million bales, up 6 percent from last year. This is 2 million bales more than the estimate 3 months ago; harvests in both China and Pakistan were substantially larger than anticipated. In addition, the high early-season prices encouraged larger plantings in the Southern Hemisphere; acreage there, which will be harvested over the next several months, is projected up 14 percent.

While foreign cotton crops are larger, foreign consumption is expected to drop 2 percent from last year's record. This decline is concentrated in China, where nonmill use will return to normal, and in the Soviet Union and India, where crops are smaller.

Consumption in the cotton-importing countries is forecast to be about the same as the 1986/87 record; this is keeping projected world trade only 6 percent below last year's record of nearly 26 million bales. For the United States, a larger share of the market will more than offset a smaller volume of world trade; exports in 1987/88 are expected to rise 3 percent to 6.9 million bales.

#### **Large Soybean Crops Likely In Southern Hemisphere**

Generally favorable weather is making large 1987/88 soybean harvests in Brazil and Argentina more and more likely. The two countries are expected to harvest a record combined area of 14.6 million hectares, and yields should be good. Combined production is expected to increase 3 million tons to 27.5 million, versus 12 million a decade ago.

These big crops, together with gains by other foreign producers, are more than offsetting another decline in the U.S. crop, and world production is projected at a record 101 million tons. Rapeseed and sunflowerseed crops are also records, and world oilseed production in 1987/88 is a record, up 5 percent from last year.

A record world crush of soybeans and all oilseeds is expected this year; the gains are large enough that ending stocks of both soybeans and all oilseeds will drop again. The ratio of soybean stocks to use has returned to near its 10-year average.

In a departure from the last several years, oil demand has strengthened demand for soybeans; a 4-percent jump in oil consumption is projected for the year. Shortfalls in Asian production have boosted import demand for vegetable oils, and world soybean oil trade is expected to rise by 6 percent. U.S. exports of soybean oil in 1987/88 are expected to total 1 million tons, nearly double last year and the largest since 1979/80.

Nearly all of this year's oil sales are occurring under one or more Government programs. Bonuses awarded under the Export Enhancement Program between November 1987 and mid-March 1988 have averaged \$128 per ton.

Strong export sales have been a major factor in this year's higher prices. U.S. domestic prices have increased from an average of \$375 per ton in October to \$461 in February (Decatur price of crude soybean oil), and they are at their highest levels since the 1984/85 season.

While world soybean meal consumption is up by 4 percent this year, world trade in oilseed meals generally is flat. The main factor is the record EC oilseed crop—up 40 percent. Meal consumption in the Community is down, and a larger share is being supplied from domestic sources. Consequently, EC soymeal imports, nearly half the world total, are about 600,000 tons less than last year. A sharp rise in Soviet imports has not been enough to offset this drop.

U.S. soybean meal exports are projected to drop 9 percent to 6.1 million metric tons. Soybean meal prices have changed very little. February U.S. prices averaged \$203 per metric ton, compared with \$204 at the beginning of the marketing year in October (Decatur f.o.b. 44-percent protein).

#### **Support Level Increased For Quota Peanuts**

On February 12, USDA announced that the national average support level for 1988-crop quota peanuts will be \$615.27 per short ton, up 1 percent from 1987. Additional peanuts' support level remains unchanged at \$149.75 per short ton.

Earlier, the national poundage quota for 1988 was increased 3.4 percent to

1,402,200 tons, based on projected increases in domestic food use in 1988/89. (Edward Allen (202) 786-1840 and Frederic Suris (202) 786-1820)

**For further information, contact:** Sara Schwartz, world food grains; Allen Schienbein, domestic wheat; Janet Livezey, rice; Peter Riley, world feed grains; Larry Van Melr, domestic feed grains; Tom Bickerton, world oilseeds; Roger Hoskin, domestic oilseeds; Carolyn Whitton, world cotton; Bob Skinner, domestic cotton; Jim Schaub, peanuts. World information, (202) 786-1820; domestic, (202) 786-1840.

## HIGH VALUE CROPS OVERVIEW

### Fruit Prices Mixed

Fruit prices this spring probably will average slightly lower than a year ago. Large supplies of apples and pears this winter depressed producer prices. During the spring, smaller supplies of lemons and expected strong demand for oranges and grapefruit likely will keep citrus prices firm and higher than a year earlier. Strawberry prices will weaken from their winter highs as supplies from California increase seasonally.

The all-orange harvest for 1987/88 will exceed last season by about 10 percent. Both Florida and Texas report larger crops, but California and Arizona navel output, which accounts for the bulk of fresh orange sales, fell. Short supplies of fresh oranges, strong demand from processors, and higher costs for imported frozen concentrated orange juice (FCOJ) firmed prices this winter.

Grapefruit production likely will exceed last season by 6 percent because of larger harvests in Florida and Texas. Strong export demand has kept prices above last year and likely will hold prices firm during the remainder of this season.

The Arizona and California lemon harvest will fall about 18 percent short of last season. The lower production and strong export demand almost assure growers of higher prices this year.

Fresh apple stocks in cold storage on February 1 stood 37 percent higher than a year earlier, reflecting a large 1987 crop. Despite strong export demand, the larger stocks will keep

prices lower than a year ago for the rest of the marketing season. The 1987 season average price was an estimated 9.5 cents a pound, down almost 30 percent from 1986.

### Vegetable Production Continuing Strong

Buoyed by stronger demand for canned and frozen vegetables, processors likely will sign up more acreage in 1988 than last year. Declining world supplies of processing tomatoes and rising U.S. exports of several processed vegetables are increasing the quantity demanded of U.S. vegetables.

Processed vegetable exports rose 27 percent between 1985 and 1987, and likely will continue strong through 1988. Devaluation of the dollar against the yen and several other major traders' currencies has lowered prices of U.S. vegetables for foreign buyers.

Sweetpotato production fell nearly 5 percent in 1987 because of lower yields in North Carolina and Texas. This was the second consecutive year of decline. Higher prices more than offset lower production to push the farm value 15 percent above 1986.

U.S. dry edible bean production rose 15 percent in 1987 on the strength of expanded acreage. Yields were up only slightly from the previous year. Dry bean prices this winter were a third lower than a year earlier. U.S. exports of dry beans are continuing to recover from their fall in the early 1980's, when Mexico cut imports and other countries, especially Asia, expanded exports. Short crops in India, Thailand, and Brazil during 1987 should fuel stronger demand for U.S. bean exports during 1988.

Potato production rose nearly 7 percent in 1987, with increased acreage and higher yields. The growers' average price for the 1987/88 crop likely will be \$4.47 per cwt, down from \$5.03 the year before. Lower prices this past season and stronger markets for alternative crops such as wheat, corn, barley, and hay likely will cause farmers to plant slightly less potato acreage in 1988.

### Mushrooms Rising

A sixfold rise in fresh consumption helped propel total mushroom use from 1.3 pounds per person in 1970 to 3.8 pounds in 1986. Greater demand

for fresh produce and the rising popularity of salad bars in restaurants and grocery stores contributed to the growth.

Exports also increased, and domestic production of mushrooms for fresh use rose nearly eightfold over the 15 years. Although imports of fresh mushrooms rose, foreign mushrooms remain a small part of U.S. fresh consumption.

Per capita use of processed mushrooms doubled between 1970 and 1986, but the share supplied by domestic producers fell. In 1970, the United States processed 149 million pounds of mushrooms and imported 43 million pounds, farm-weight equivalent. By 1986, 157 million pounds of domestic mushrooms were processed, while imports had grown by 500 percent to 275 million pounds.

Consumption of exotic mushrooms (shiitake, enoki, oyster, chanterelle, morel, and others), which are mostly consumed fresh, likely will rise. Although detailed production and consumption data on exotic mushrooms are not available, a recent survey indicates that shiitake production grew more than twelvefold in Virginia, West Virginia, North Carolina, and South Carolina between 1984 and 1987. Industry sources indicate exotic production may expand fivefold between 1987 and 1990.

### U.S. Sugar Use Turns Around

After declining for 10 consecutive years, 1987 U.S. sugar use rose 5 percent from 1986 (3.2 percent on a fiscal-year basis). Sugar deliveries stood at an estimated 8.172 million short tons, raw value, for the calendar year.

Beet sugar accounts for a larger percentage of the total than in the past because sugar imports have been falling; most imported sugar is produced from cane. Beet sugar deliveries rose by 17 percent while cane sugar deliveries fell 3 percent.

The largest growth occurred for sugar used in manufacturing confectionery, cereal, and bakery goods. Deliveries for all industrial uses, primarily food processing, rose 5.7 percent, while shipments for confectionery, cereal, and bakery uses rose 7 percent.

Beverage production was the largest single use for sugar in 1978, taking

1.5 million tons that year. In 1987, use fell 20 percent from 1986 to just over 200,000 tons. High fructose corn syrup (HFCS) and low-calorie sweeteners, such as aspartame and saccharin, have eroded sugar's share of the beverage market.

Sugar deliveries to wholesale and retail grocers and to food institutions such as hotels and restaurants grew 4 percent during 1987. Deliveries to retail grocers had been falling for several years, probably indicating that consumers are using less sugar in preparing foods in the home and purchasing more manufactured sugar-containing products such as bakery goods and desserts.

Sugar deliveries likely will rise an additional 1.5 percent in 1988 to about 8.3 million tons, raw value. A slowing of the substitution of HFCS for sugar in food and beverage manufacturing, plus slower-than-expected growth in crystalline fructose production, will help sugar maintain its share of the sweetener market. Imports of sugar-containing products have stabilized. *[Glenn Zepf (202) 786-1882]*

For further information, contact: Ben Huang, fruit; Shannon Hamm, vegetables; Dave Harvey, sweeteners; Verner Grise, tobacco. All are at (202) 786-1886.

## Upcoming Economic Reports

Summary Released	Title
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### April

- 1 Tobacco
- 11 World Ag. Supply & Demand
- 14 Oil Crops
- Agricultural Resources
- 19 Agricultural Outlook
- 20 Dairy
- 26 Foreign Ag. Trade of the U.S.
- 28 World Food Needs & Availabilities
- 29 National Food Review



## Commodity Spotlights

### World Barley Trade Remains Strong

World barley trade grew explosively over the last two decades, and has shown signs of leveling off only in the last year. Growth accelerated during the 1980's, and in 1985/86, when world trade in other grains experienced severe contractions, barley trade continued to increase.

The striking trade gains have been supported by increases in exportable supplies, and have been fueled by export subsidies, particularly by the European Community (EC), the largest exporter. One of the key factors in demand has been the dramatic rise in imports by Saudi Arabia, now the world's largest importer, sparked by import subsidies.

Although world barley production is forecast at a record 185 million tons for 1987/88, trade is projected at 17.9 million tons, slightly below the 1985/86 record (based on an October-September trade year, excluding intra-EC trade). Over the last two decades, much of the increasing production was not used domestically, which added to surpluses in exporting countries. Exports will contribute to record world consumption in 1987/88, an expected 187 million tons.

### Barley Market Extremely Competitive

The world market for barley features sharp competition with other feed

grains and among barley suppliers. Most of the barley traded is for feed use, with a much smaller amount for malting. Although world demand for beer and other malt beverages is growing, this is mostly met by imports of barley malt, which is a higher-value processed product. (Malt trade is smaller than that of grains and will not be discussed here.) Little of the barley traded is used for food.

Import demand for feed barley is largely shaped by relative prices of competing feed grains, and to a lesser extent, non-grain feeds. Barley has a lower energy content than corn, for example, and is priced lower. These price relationships reflect different feeding values, but also reflect availabilities of grain and other substitutes, along with policy effects.

The main barley exporters are the EC, Canada, the United States, and Australia. Canada and the EC have alternated as the single largest supplier in recent years, with the EC forecast as the largest in 1987/88. The same four are also the top wheat exporters. There is a large degree of concentration in barley trade, as exports from other suppliers, including Austria, Finland, New Zealand, and Sweden, are comparatively low. The other exporters' share will be even smaller this year; Sweden and Finland are forecast to become net importers.

The import side is also comparatively concentrated. Saudi Arabia, the USSR, Japan, Eastern Europe, North Africa, and the Middle East account for nearly all imports. Import demand by Eastern Europe is up significantly this year because of low domestic production, but is generally more sporadic than that of other importers. The increase in Eastern Europe's imports is expected to offset some of the decline in Saudi Arabia in 1987/88. The Soviets were generally the largest importers in the late 1970's, and are currently the second largest.

### Rising Feed Demand and Subsidies Have Spurred Saudi Imports

The most remarkable barley development during the 1980's has been the increase in Saudi Arabia's imports to 8.5 million tons in 1986/87 from under 100,000 just 10 years earlier. The key factor has been import subsidies. These were equivalent to \$81 per ton before a 67-percent cut in September 1987, and sometimes exceeded the price of the grain itself.

World Barley Trade: Major Exporters and Importers

	1983/84	84/85	85/86	86/87	87/88
Million mt					
<b>Exporters</b>					
Australia	3.6	4.7	3.7	2.2	2.1
Canada	4.2	2.5	4.8	6.0	4.8
EC-12	3.8	7.6	7.3	5.7	7.0
United States	2.1	1.2	0.8	3.0	3.3
Other	2.9	2.1	1.9	1.2	0.7
<b>Total</b>	<b>16.5</b>	<b>18.0</b>	<b>18.4</b>	<b>18.0</b>	<b>17.9</b>
<b>Importers</b>					
Eastern Europe	1.7	1.7	3.3	1.3	2.1
Japan	1.6	1.7	1.5	1.2	1.2
Saudi Arabia	5.1	4.7	6.6	8.5	5.5
USSR	0.5	4.7	2.9	3.0	3.0
Other	7.6	5.3	4.0	4.0	6.1
<b>Total</b>	<b>16.5</b>	<b>18.0</b>	<b>18.4</b>	<b>18.0</b>	<b>17.9</b>

Oct.-Sept. year, Excluding intra-EC trade. Forecast for 1987/88.  
Details may not add due to rounding.

Underlying the Saudi trade has been vibrant feed demand and accompanying gains in dairy, livestock, and poultry production. A commitment to improve the diet has been supported by Saudi Arabia's plentiful foreign exchange. Saudi Arabia also feeds a large number of sheep, imported live every year for Moslem pilgrims.

Despite strong growth in feed use, Saudi imports have been even higher than needs. This led to accumulation of large stocks by 1987, and may have led to some re-exports to neighboring countries. The recent cut in import subsidies is expected to drop 1987/88 barley imports to 5.5 million tons. This is still well above the next largest importer, the USSR, whose imports are forecast at 3 million tons.

In addition to budget considerations, one motivation for the Saudi cut in subsidies was an attempt to increase domestic production. Recent increases in the producer price have failed to bring a big response, and 1987/88 output is forecast at less than 150,000 tons.

Saudi Arabia has made huge advances in wheat production through heavily subsidized incentive prices, and has even become a net exporter. Barley production competes with the more profitable wheat, and the prospects for increases sufficient to displace imports are small, until there

are substantial changes in price policy. The longer-term prospects for production of both crops appear limited by declining supplies of water for irrigation.

#### *Declining Use Fees More EC Barley for Export*

Production in the last two decades has trended upward in the major exporting countries. Both Australia and the EC had record barley crops in 1984, and Canada and the United States had records in 1986. However, since the late 1970's, total barley consumption in these countries has been relatively flat, increasing exportable supplies. These trends, along with various government policies, have depressed export prices and supported recent gains in trade.

Excess production has widened for all of the major exporters, but individual countries vary. In Canada, domestic use has been increasing steadily, although more slowly than production growth. For both Australia and the United States, consumption has also trended upward at a rate lower than production growth but more erratic.

The most pronounced barley excess is in the EC. Since peaking in 1980, EC barley use has been falling. Two of the main factors stem from the EC's policy regime. One is strong competition from non-grain feeds such as cassava. The other is increasing use of wheat for feed, largely at the expense of barley and other coarse grains.

About 80 percent of EC barley use is for feed. Barley is still the most important grain fed and the leading feed grown and used on farms. However, attractively priced non-grain feeds have been providing more energy content in feed rations, and are imported at minimal or no tariffs. Tariffs on imported cereals protect domestic producers, but contribute to high costs for users.

Meanwhile, the use of feed wheat has surged to record levels in the EC, more than doubling in the last decade. One reason has been increasing production of higher-yielding, lower-quality wheat, chiefly in the UK. Another reason has been tighter quality standards for EC intervention stocks.

These changes have led to higher barley exports. While there is substantial intra-EC trade in barley, for both feed and malting, exports to destinations outside the EC have soared. The EC's chief markets have been the Soviet Union and Saudi Arabia. The cost of these exports is substantial, however, because internal EC prices are well above export prices. The rising value of EC currencies and lower barley prices have raised subsidy costs in the past 2 years.

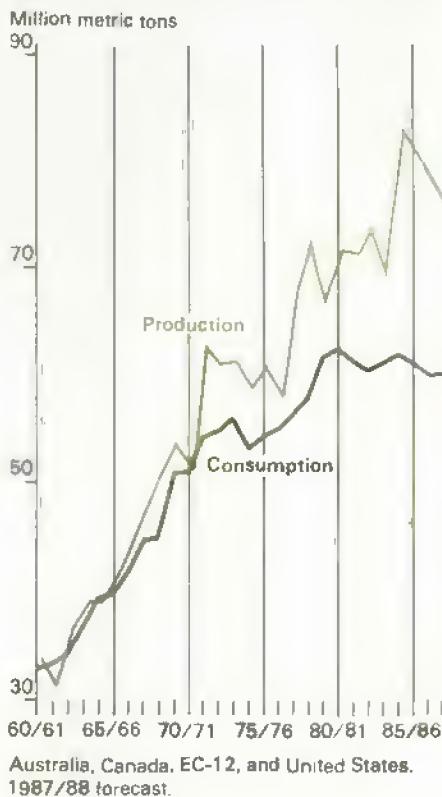
The United States has become more competitive in world trade following lower U.S. loan rates for barley and sales under the Export Enhancement Program (EEP). Future U.S. exports probably will depend on EEP initiatives.

#### *Policies Critical for Trade Outlook*

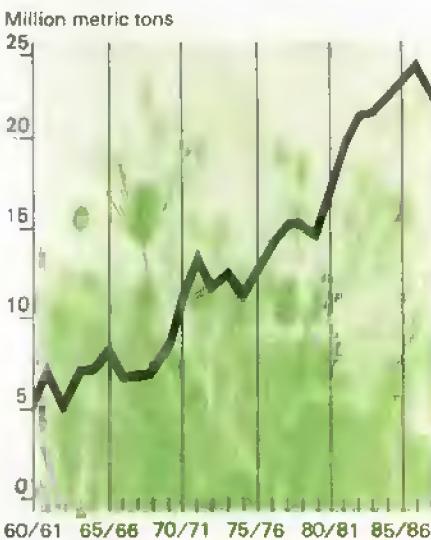
Policy interactions will continue to have a major role in the world barley market. Saudi Arabia recently announced requirements to color imported barley with dye so that it could not be falsely identified as domestically grown. Although adding some costs, it is not clear if this will have any discernible impact on trade flows. Saudi price and subsidy decisions will largely shape future import levels.

Because of escalating budget expenses, the EC is also wrestling with policy changes. Guaranteed prices to grain producers have been lowered slightly in recent years, and it was just agreed to penalize cereal producers for production over a certain level. However, no dramatic impact on bar-

## Barley Production Outpaces Consumption Among Major Exporters



## World Barley Trade Recesses From Recent Peak



1. Forecast for 1987/88.
2. Oct.-Sept. crop year.
3. Includes intra-EC trade.

ley production (or other cereals) is anticipated. EC production and exports are likely to continue high and could increase.

Barley production in Spain—which has become more attractive since Spain's accession to the EC and its higher guaranteed prices—should continue to grow. And because of the saturated EC feed market, corn and sorghum imported by Spain under the EC/U.S. Compensation Agreement will free up more EC grain for export. The EC is expected to retain its high profile in world barley markets. (Pete Riley (202) 786-1824)

### Florida and Texas Citrus Making Brisk Recovery

California citrus was hit by freezing weather in late December 1987, but Arizona, Florida, and Texas citrus escaped serious damage this winter. This makes three consecutive seasons for Florida and four for Texas without serious freeze damage, allowing them to continue their strong recovery in acreage, yield, and production.

Cool temperatures during the winter make citrus trees semidormant, and thus less susceptible to damage if freezing weather should occur later in the season. Cool spells also enhance the condition of the trees and increase yields the following season. Even so, growers in all four citrus-producing States anxiously awaited the end of the December-February period, which historically has seen most of the disastrous freezes.

### Freezes Reduce Current Production And Future Capacity

A severe freeze immediately cuts current-season output and lowers yield potential for the next several seasons, but more importantly, kills many trees. Together, the freezes that struck Florida in 1981, 1982, 1983, and 1985 killed at least 250,000 acres of citrus. Texas citrus suffered severe freeze damage only once this decade, in December 1983, but half of the State's 60,000 acres in the Rio Grande Valley were lost. Trees that survived produced virtually no fruit during the following (1984/85) season.

Florida's most recent tree inventory, in 1986, showed 625,000 acres of citrus, well below the 1970 peak of 941,000. Industry sources indicate that acreage

may have risen to about 700,000, with estimated planting of 24,000 acres during 1985 and 35,000 to 40,000 acres in both 1986 and 1987. Florida is conducting its biennial citrus inventory to determine actual plantings and standing acreage.

Most of the acreage lost during 1981-1985 was in 16 counties in the northern half of the citrus belt. An estimated 100,000 acres, or about one-half of the frozen region, has been re-established. Many of the replanted groves are to earlier varieties of oranges and some specialty citrus on rootstocks less susceptible to freeze damage.

Substantial plantings have also been made in southerly regions of the citrus belt, mostly on land not previously in citrus. These new groves are being set at densities of 150-360 trees per acre on more productive soils and where water tables are high, which will reduce irrigation needs.

### Planting Stock Now More Abundant in Florida

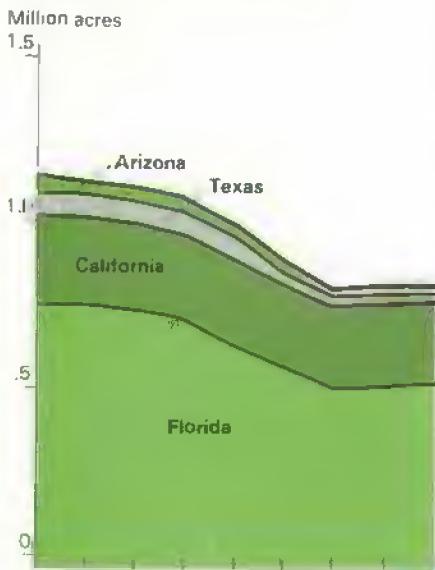
Florida growers have faced not only freezes, but also a citrus canker outbreak. About 20 million citrus trees in Florida nurseries have been destroyed under the Citrus Canker Eradication Program since its outset in August 1984. There is evidence that replanting efforts were slowed by inadequate nursery stock from 1981 to 1985. But stock appears to have been more than adequate during the last 2 years, and is currently abundant. As of June 30, 1987, Florida's commercial citrus nursery stock totaled 44 million trees (including budwood, seedlings, and grafted stock). Current inventory is approximately 50 million trees. This is enough to set or reset at least 350,000 acres.

Texas growers are still waiting for increased nursery stock, particularly grapefruit. Demand is especially high for the Rio Red variety, which accounts for 70 percent of the total citrus budwood.

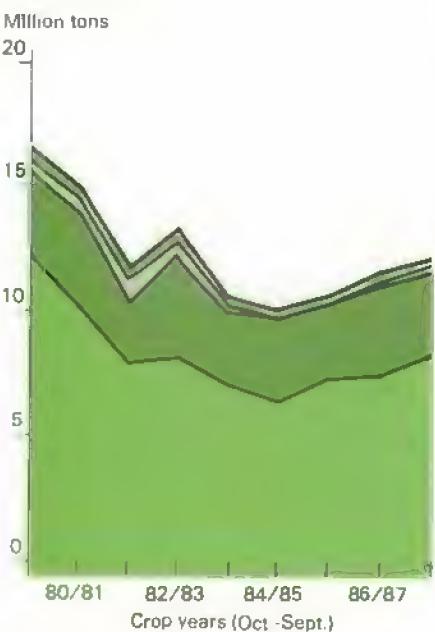
### Production Increases Due Mainly to Yield

Production of all round oranges in Florida sagged to 103.9 million boxes (90 pounds per box) in 1984/85. "Round oranges" refers to all early and midseason varieties including Valencias, but excluding Temple oranges. The 1987/88 output could total 140 million boxes from an estimated

## Freezes Have Reduced Citrus Acreage...



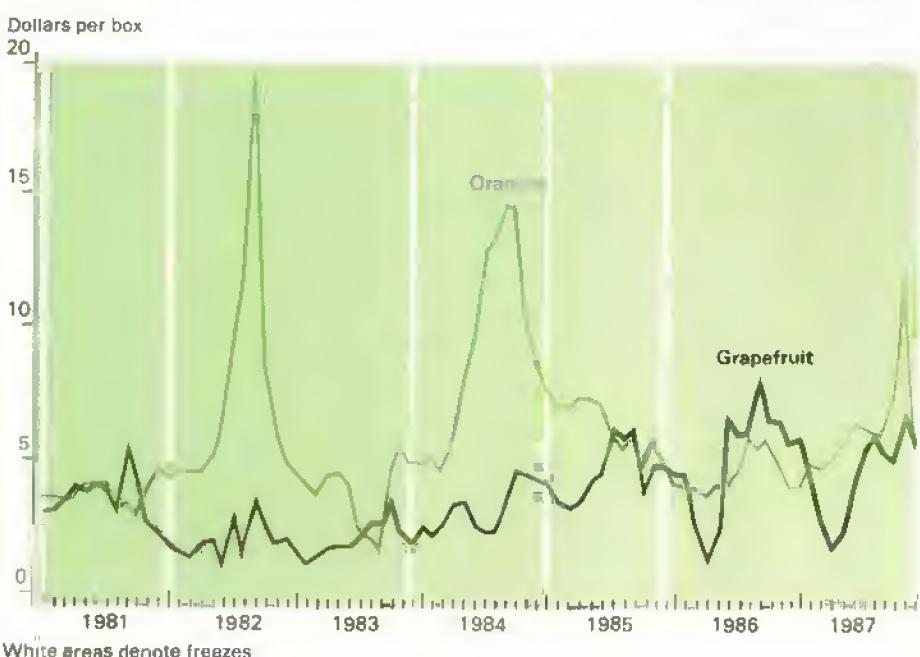
...But Production Is Slowly Recovering



375,000 bearing acres. This will result in a record yield of 373 boxes per acre, 2 percent above the previous record of 1979/80.

Bearing acreage in Florida hit a 29-year low in 1986 at 367,600 acres, compared with the record 660,500 in 1970/71. Although total citrus area in Florida has fallen 43 percent since 1971, this season's output, at nearly 8.9 million tons, is higher than 17

## Freezes Boost Prices



years ago. But it is far below the record for all Florida citrus—12.4 million tons in 1979/80.

This season's all-orange juice yield in Florida is record high at 1.53 gallons per box. Thus, Florida's orange output will result in about 170 million gallons of frozen concentrated orange juice (FCOJ), 17 percent more than last season's pack, and more than twice the total expected volume of Brazilian juice imports to the United States this season.

In contrast to oranges, Florida's grapefruit suffered only moderately from the freezes, mainly because grapefruit plantings are heaviest in the Indian River district, which did not sustain heavy damage. Bearing acreage during the mid-1980's fell 20 percent from the record 128,620 acres of 1982/83, but recently has risen slightly. Production in 1987/88 is expected to total 52.0 million boxes, only 5 percent below the 1979/80 record; yields have been increasing since 1983.

This season's yield of 486 boxes per acre is only 3 percent below the record of 1966/67. New plantings of grapefruit in Florida have slowed in the past 3 years, but they were relatively strong from 1981 through 1984.

Texas all-orange bearing acreage has been holding steady at 8,300 acres the last 2 seasons. This is 66 percent below the acreage standing when the

December 1983 freeze struck the Rio Grande Valley. New plantings and replantings of groves that were frozen out have been modest. As of March 1, 1987 nonbearing acres (trees less than 4 years old) totaled 3,500. This new acreage will have no major impact on production for several more years. Orange output is less than one-third of prefreeze levels, and is not expected to grow rapidly.

More grapefruit is being replanted than oranges in Texas, and the recovery pace is quicker. The March 1, 1987 grapefruit inventory showed 18,500 acres, of which 5,000 were planted in 1984-86. Although the bearing acreage of Texas grapefruit has shown little increase during the last 2 seasons, production stands at 136,000 tons, 3 percent above the freeze-reduced 1983/84 season. However, the 1987/88 grapefruit tonnage is less than one-third of prefreeze levels.

Total citrus plantings in Texas since the freeze have averaged 3,000 to 5,000 acres per year. The Texas citrus industry is recovering more slowly than Florida's, and it will be many years before production reaches the levels of the early 1980's.

## Citrus Capacity Expanding

Future citrus production depends on five factors: tree numbers, tree ages, tree losses, tree plantings, and fruit

yield per tree. Tree numbers decreased by a smaller percentage than acreage as a result of the freezes. This reflects the trend toward denser plantings (more trees per acre) which is pushing up yields per acre.

Since the freeze, the average age of trees is lower. The 1986 Florida inventory indicates nearly 10.8 million trees, or 25 percent of all round-orange trees, are 4 years old or less, mostly nonbearing, which reflects new plantings. This is the largest share of nonbearing trees since 1968. Nevertheless, the majority of orange and grapefruit trees in Florida in 1986 were in the older, more productive age groups. Trees, especially grapefruit, in the 25-years-and-older population category experienced substantial losses in recent years, though.

The Florida Department of Citrus indicates that round orange and Temple production in Florida will increase 25 to 30 percent in the next 9 years. This assumes future tree plantings equal to the 1981-85 average, average yields, and tree losses comparable to those prior to 1983. This scenario would result in production 21 percent below the record round orange and Temple crop of 212.7 million boxes in 1979/80. However, if plantings are higher, yields above average, and tree losses normal (no major freezes), production could return to prefreeze levels in the not-too-distant future, but should not surpass the previous record before 1996/97.

Projections differ by type of orange. If orange plantings during the next 9 years are double the 1981-1985 average, then by 1996/97 early and mid-season orange production would grow by 63 percent and late orange (Valencia) output by 33 percent, but Temple production could fall by 15 percent due to low planting rates.

Grapefruit production is projected to grow at a faster rate than oranges. If grapefruit tree plantings over the next 9 years are even half the 1981-85 rate, production by 1996/97 could equal or exceed the record of 54.8 million boxes in 1979/80. In fact, production could reach a record by 1990.

#### **Higher Grower Returns Driving Recovery**

Growers are basing replanting decisions on the continuation of improved on-tree returns of recent years. On-tree prices this season are mostly

higher than the 2 previous seasons, particularly for fresh fruit. Processing prices have been firming up, as have retail orange juice prices. Despite higher wholesale and retail prices, sales have been strong. Consumer demand for fresh fruit and juices (chilled, frozen, and blends) continues to grow. But U.S. citrus will have to compete against increasing supplies of deciduous fruits and citrus in the domestic and foreign marketplace.

Export markets have been strong for citrus, partly owing to the less expensive dollar but also to increased global demand and improved trade agreements. Japan recently raised orange import quotas, and the European Community lowered its duties. Export sales to all major trading countries have been significantly higher during the last 2 seasons. In view of strong domestic demand and improved export markets, U.S. citrus grower prices may rise.

However, U.S. growers will have to review expansion plans as global citrus supplies increase. Mexican production, which was also severely damaged by the 1983/84 freeze, should make substantial gains in the next few years. Brazil, hurt by dry weather this season, likely will rebound next season. Production from these and other competing countries may eventually limit the recent gains in grower prices or even reverse the trend. At the same time, global demand continues to strengthen in response to improved trade and economic growth. *[Doyle Johnson (202) 786-1884]*



#### **Farm Finance**

#### **FINANCIAL TURNAROUND IN AGRICULTURE**

A major financial turnaround has occurred in agriculture. Real net farm income (in 1982 dollars) during 1986-88 is 75 percent higher, and the real interest burden is nearly 40 percent lower than during the recessionary period of 1980-83. The income and debt-service problems that plagued agriculture during the 1980's have, for the most part, been weathered. Although financial problems persist for some cash grain, dairy, and beef producers, the agricultural sector as a whole no longer faces a financial crisis.

#### **Farm Income Continuing Recovery**

Real income was in the \$30-billion range (1982 dollars) during 1960-71. These 12 years can be viewed as a stable benchmark for farm income. Real income began to decline in the 1976-79 post-world-food-crisis years, and bottomed during the 1980-83 farm recession. Following this downturn, income began to rise in 1984-85. Real income during 1986-88 is about equal to the 1960-71 benchmark.

While a number of factors underlie the recovery of farm income, none is more important to long-range stabilization than the decline in interest expense. Real interest on farm business debt increased \$13 billion between 1970 and 1982. This accompanied an \$80-billion increase in real debt.

Agriculture was confronted in the 1980's not only with an income crisis (including the loss of export markets and falling prices) but also with a debt-service crisis (involving high debts relative to assets and high interest rates). Real interest expenses in 1988 will be nearly \$10 billion less than in 1982. Financing costs are down and income is higher. The farm sector as a whole no longer faces either a debt-service or an income crisis. However, many individual farmers remain highly leveraged, and the process of debt restructuring continues.

### Economic Fundamentals Improving

A business downturn often forces an industry to lower costs in order to maintain or regain competitiveness. This is the case with agriculture. The cost of producing agricultural commodities fell more than \$20 billion, about 17 percent, between 1984 and 1988.

Government acreage reduction programs, lowered input use, and greater cost consciousness underlie much of the sector's improved cost structure. Additional savings have originated outside the farm economy as energy prices and interest rates declined.

Also contributing to cost reductions are lower expenditures for machinery and equipment, which have been cut by \$5 billion since 1984. These major adjustments, in combination with higher Government payments, enabled most crop farmers to survive several years of low commodity prices.

There has been an intangible yet fundamental change in the business attitudes of farmers. Farmers in the late 1980's are more cost-conscious managers. Some valuable lessons were learned in the boom-to-bust period of 1972-1983. The emphasis in agriculture has changed from growth in production to reducing production expenses and lowering debt-service burdens.

### Livestock Sector Led Rebound

The livestock sector has led the farm recovery. Since the fourth quarter of 1985, hog and cattle farmers have benefited from generally higher prices and lower feed costs. Feed expenses declined by \$2.4 billion during 1985-87, while hog and cattle receipts increased by \$4.7 billion. Poultry and egg sales increased \$1.5 billion in 1986 before declining in 1987.

### 1988 Income Outlook Continues Strong

The farm sector's strong income and financial performance of 1987 is continuing in 1988. Farm income is forecast to be the second highest on record. Net cash income likely will be between \$50 and \$55 billion. Net farm income, which includes depreciation and changes in stored inventories of commodities, likely will be between \$40 and \$45 billion.

- **Crop receipts higher.**—Food grain prices are estimated 14-18 percent higher, and feed grain and oil crop prices 9-13 percent higher in 1988. Largely in response to these higher prices, total crop receipts are projected to increase from \$59 billion in 1987 to \$64-\$67 billion in 1988.
- **Third highest livestock receipts.**—Livestock receipts in the \$71-\$74 billion range will be near the 1987 record of \$74 billion. While cattle receipts will be the second or third highest on record, hog and dairy receipts may each fall nearly \$1 billion. Substantial increases in supplies could bring hog prices down by one-sixth from last year, and poultry prices one-fourth below 2 years ago.
- **Farm expenses rise.**—A \$2-billion increase in farm expenses signals the end of the 1984-87 downturn. Feed and fertilizer prices may increase 6-7 percent, translating into \$2 billion of added costs. Repairs, energy, and labor expenses could rise \$1 billion in 1988, while interest and livestock purchases could decline by about \$1 billion.

There will be continued improvement in the farm sector's balance sheet. A slight strengthening of land prices and a \$5- to \$10-billion reduction in farm debt will increase equity by perhaps \$10 to \$20 billion. The debt-to-asset ratio, an important indicator of the financial position of farmers, may decline to less than 19 percent, a level last achieved in 1981. This ratio peaked at 23 in 1985.

### Higher Crop Profits Having Broad Financial Impact

The combination of higher crop prices, lower hog and poultry prices, and higher feed costs is shifting profits from livestock to crop producers. Other impacts of higher crop prices are:

- **Land values.**—The turnaround in land values coincided with the turn-around in corn and soybean prices during the first 6 months of 1987.
- **Less financial stress.**—Higher crop prices, and the related strengthening of land prices, result both in higher cash flows for crop farmers and in the stabilization of loan security (collateral) provided by real estate assets. Cash flow and collateral largely determine stress conditions.
- All regions, including the economically hard-hit Delta and Southern Plains, are likely to have less farm financial stress in 1988. Roughly 60 percent of loan default problems of commercial farmers were on primarily crop-producing farms at the start of 1987, when these farms received lower commodity prices, and when falling land values reduced their underlying collateral value (based on analysis of USDA surveys). This year's higher crop prices and strengthening land values will lessen loan default risk in the crop sector.
- **Capital expenditures pick up.**—Investment in fixed assets occurs when cash flows improve and there is confidence in long-run profit potential. An increase in 1988 capital expenditures, possibly as large as \$1 billion, suggests farmers now have increased confidence. Tractor and combine sales to crop producers are leading the increase.
- **Lower Government payments.**—Government outlays are reduced when the prices of supported crops reach or surpass Commodity Credit Corporation loan rates, as they are doing this year. Direct Government payments are projected to decline 16 to 20 percent in 1988, to \$13-\$15 billion.

The return to a more traditional balance between crop and livestock sector profitability is having a stabilizing impact in regions as diverse as the Mississippi Delta and the Eastern Corn Belt. However, higher crop returns are in part due to Government price supports, acreage reduction programs, and export enhancement programs. [Gregory Hanson (202) 786-1808]

Better Financial Performance Beef and Hog Operations, 1985-87 1/

	--Beef operations--			--Hog operations--		
	1985	1986	1987	1985	1986	1987
Percent						
Share of farms with potential loan losses	14	16	16	23	22	12
Share of farms with debt greater than assets	1	7	5	9	12	5
Dollars						
Average debt outstanding	171,280	187,760	144,890	132,750	142,010	119,560
Commodity receipts + Gov. payments less cash expense	-8,230	-33,160	4,300	12,950	28,700	36,920

1/ January 1st.

Source: USDA Farm Costs and Returns Surveys.

The Improving Ability to Service Debt in Agriculture

	1982	1983	1984	1985	1986	1987	1988
\$ billion							
1. Business debt	189.5	192.7	190.8	175.2	155.0	140.7	128-130
2. Interest expense	21.8	21.4	21.1	18.7	16.9	14.5	13-14
Percent							
3. Debt service ratio 1/	23	23	20	19	17	20	10-20
4. Int. service ratio 2/	14	14	14	12	11	9	9-11

Excludes Commodity Credit Corporation (CCC) debt

1/ Estimated principal repayment plus interest expense divided by gross cash income. Debt service includes both interest and estimated principal repayment. Principal repayment was based on the following assumptions: typical real estate debt was in the tenth year of a 30-year mortgage and typical intermediate term debt was in the third year of a 7-year mortgage. The principal repayment percentage ranged from 1.2 to 13 percent for 10 categories of short-and long-term lenders, merchants, commercial banks, Federal Land Banks, etc. 2/ Total interest divided by gross cash income.

More than 80 percent of the \$10-billion increase in net cash income from 1985 to 1987 went to livestock producers. Strong growth in net cash income was shared by most major livestock enterprises in 1986, and by hog, dairy, and beef farms in 1987.

After falling from the 1985 peak, lower feed grain receipts have contributed to the recent financial stress on Midwest crop farms. However, the strong rebound in livestock earnings has provided an important offset in this region. Five of the top 10 cattle-producing States and seven of the top 10 hog-producing States are located in the Northern Plains (from North Dakota to Kansas), and Western Corn Belt (Illinois, Iowa, Minnesota, Missouri, Wisconsin).

Gains in livestock receipts and major increases in Government payments translated into 70-80 percent increases in net cash income in the Northern Plains and Western Corn Belt. Farmers used their higher incomes to pay down more than \$6 billion of farm business and household debt annually during 1984-87. They are now in a position to reap substantial benefits in 1988 from continued livestock profits and from recovering crop profits.

USDA surveys show that by early 1987, higher hog and beef returns were strengthening farm finances. The share of beef producers facing possible loan default has stabilized at 16 percent after many producers returned to profitability in 1986.

Reflecting 2 years of improved earnings, the share of hog farmers with loan repayment difficulties fell by nearly 50 percent between early 1985 and early 1987. Only one in 20 commercial-size hog and beef producers was insolvent in early 1987. Debt fell by more than \$40,000 in 1986 for the typical beef producer, and by more than \$20,000 for the typical hog producer. The red ink of the 2 previous years was changed into a modest cash profit of \$4,300 for beef producers in early 1987, and hog incomes tripled between early 1985 and early 1987.

**Farm Debt Crisis Is Receding**

The debt crisis of the early and mid-1980's has subsided. By the end of this year business debt in agriculture likely will have fallen \$55-\$60 billion, or nearly one-third, since 1983. The proportion of income required to service principal and interest obligations

will have declined to the 10-20 percent range in 1988, as compared with 21-22 percent in the early 1980's.

Farmers' recent financial progress is evident in the closely watched debt-to-asset ratio, which measures the degree of lender security and the farmers' use of their earnings and capital to finance farming operations. After climbing to 23 percent in 1985, the debt-to-asset ratio declined to 17-19 percent in 1988.

Lower priced inputs and larger acreage reductions have lowered expenses. Cost-conscious managers have made further savings in production expenses. Consequently, cash operating costs have absorbed a significantly lower share of gross revenues in the second half of the 1980's.

### Some Financially Stable Farms Remain Vulnerable

Three major groups of farms currently display financial stability but are still subject to future financial reversals:

- **Livestock farms with high debt positions.**—Strong incomes for beef, dairy, hog, and poultry enterprises have permitted livestock producers to service debt burdens representing 40-60 percent of assets or higher. Lower livestock, milk, or poultry prices, in combination with higher feed prices, could cause the financial burdens of commercial livestock producers to increase substantially.
- **Cash grain farms with moderately high debt.**—Many corn, soybean and small grain producers with debt loads of 30-50 percent of assets have successfully serviced their debt in spite of lower commodity prices in recent years. However, their continued success has been primarily due to input price declines, outstanding weather and record yields, and an infusion of commodity program payments. Reversals in these factors without offsetting increases in commodity prices could put many cash grain producers in financial default.
- **Low-debt cash grain farms experiencing crop failure.**—Current commodity prices leave little leeway for substantially reduced yields. Individual farmers with debt burdens less than 40 percent could experience financial difficulty should crop production decline

### Net Cash Income by Type of Farm

Year	Net cash income						
	Corn, soybeans, wheat	Vegetables, fruit, nursery	Poultry	Hogs	Dairy	Beef	
\$ million							
1985	8,620	10,670	7,470	1,790	3,640	6,400	
1986	7,470	11,750	9,140	2,820	5,010	7,680	
1987	6,590	13,620	8,090	3,380	6,040	10,290	
Percent							
Change 1985-87	-24	28	8	89	66	61	

Source: USDA, Farm Income Forecast Project. Amounts in current dollars.

### Net Cash Income in the Upper Midwest: All Types of Farms

	1980-83	1984-86	1987-88
\$ million			
Western Corn Belt (IL, IA, MN, MO, WI)			
Livestock receipts	17,451	16,561	17,200-18,200
Feed	3,764	3,362	3,200-3,600
Interest	4,916	3,272	2,800-3,100
Government payments	926	2,514	5,200-5,600
Net cash income	9,203	9,818	12,000-13,000
Northern Plains (KS, NE, ND, SD)			
Livestock receipts	9,798	10,193	10,800-11,800
Feed	2,262	2,110	2,000-2,300
Interest	2,712	2,553	2,100-2,400
Government payments	995	2,113	3,800-4,100
Net cash income	3,832	5,908	7,000-7,600

### Expenditures, Government Payments, and Crop Prices

	1984	1985	1986	1987 E	1988 F
\$ billion					
Total expense	143	134	122	120	120-123
Capital expenditures	13	10	9	7	7-8
Direct Government Payments	9	8	12	17	13-15
Dollars per bu. 1/					
Corn price	3.05	2.50	1.96	1.56	1.65-1.95
Wheat price	3.46	3.19	2.71	2.55	2.65-2.95
Soybean price	7.02	5.42	5.00	5.09	5.45-5.85

E = estimate. F = forecast. 1/ Calendar year average.

from adverse weather, as occurred with the drought of 1983. Low-debt producers with major crop loss could be vulnerable if they are not participating in Government programs.

Present projections for commodity and input prices, including interest rates, do not suggest that many farmers will in fact become unduly stressed. Also, lower Federal payments in 1988 should not cause further financial stress as higher crop prices provide compensation.

The process of business recovery has not been shared equally by all types of operations, or in all regions. By early 1987, conditions in the financially hard-hit Midwest had stabilized or improved. The South was the only region in which land prices did not stabilize in 1987. But loan default risk is expected to lessen in the Southern Plains, Delta, and Southeast during 1988.

A broad array of business factors determines the economic well-being of agriculture. Included are commodity prices, input prices, debt service costs, land values, credit availability, crop stockpiles, and cost-control management. Last year these factors contributed significantly to rising farm income and a turnaround in the sector's finances. *[Gregory Hanson and Richard Kodl (202) 786-1808]*



## Resources

### IRRIGATION TRENDS & OUTLOOK FOR GROWTH

About 30 percent of the value of U.S. crop production comes from the 13 percent of harvested U.S. cropland that is irrigated. These farms tend to have more acres, higher yields, and more value per acre.

Irrigated farms are more highly capitalized than nonirrigated, with more than twice as much invested in land, buildings, machinery, and equipment. They produce four times more crops per farm and two times more livestock. They use more than twice the fertilizer and three times the pesticides. And they use three times more energy and five times more labor.

Weather maps show a line of 20 inches of average annual precipitation running from northwest Minnesota to southwest Texas. This line is the generally accepted boundary between wet and dry America. About 85 percent of the irrigated land is in the Western United States, where there is less rain, and where many commercial crops require irrigation in most years.

Irrigation in the arid area grew rapidly after World War II, but that growth has stopped. The outlook for additional growth in irrigation is in the humid areas of the East, where rainfall is usually plentiful enough to ensure growth and maturity of most crops without irrigation. Six of the top

10 States in market value per irrigated acre are in the East, where a majority of irrigated farms specialize in high-value crops such as fruits and vegetables.

After World War II, irrigation approximately doubled in the 48 coterminous States. Federal development of low-priced surface water was a major factor in the West. Recently, growth has slowed in the 11 Western States, as public support for new irrigation development has waned and the availability of reservoir sites has declined. No new Federal water projects have been authorized there for more than 10 years. However, some States have developed surface water and private groundwater.

Irrigated cropland area expanded in response to favorable economic conditions and commodity prices during the 1950's, 1960's, and 1970's. This was particularly true in the six Great Plains States, where advances in deep-well pump technology and adoption of the center pivot system spurred growth in privately developed groundwater irrigation.

But this growth was dependent upon lavish supplies of groundwater, mainly from the Ogallala aquifer. Because of limited recharge, the Ogallala could not sustain such use without marked groundwater declines. Limits to groundwater supplies, higher pumping costs because of longer lifts and higher energy prices, and declining commodity prices brought a halt to irrigation development in the Plains.

Growing competition from municipal and industrial water users for ever scarcer and more expensive water makes it unlikely that much expansion potential exists in the West. Major interregional water transfers from Eastern areas also appear unlikely; the negative political repercussions and projected costs of such transfers are prohibitive.

Additionally, many of the groundwater pumps and application systems installed over the past 30 years are nearing the end of their useful lives. Replacement of this machinery and equipment will pose a major investment decision for irrigators. The 1987 Census of Agriculture, currently being compiled, is expected to show a further decline in Western irrigated acreage.

The most recent agricultural census was 1982. By that time, irrigated acreage declined because of reduced exports, a downturn in the farm economy, and increasing depletion in the underground aquifers in the southern Great Plains. Except for North Dakota, South Dakota, and Nebraska, irrigated acreage in the Western States declined from the previous census in 1978.

### **Humid Area Irrigation Continues Growing**

Irrigation in the 31 humid States, while a small proportion of humid-area agriculture, has experienced rapid and sustained growth, quintupling during the last three decades. Corn, soybean, and rice irrigation contributed to this growth, along with fruit, vegetables, and other horticultural specialty crops. Income from these crops contributes significantly to the rural economies of some regions.

Humid-area irrigation protects against frost and drought, increases the productivity of sandy soils, and improves the quality and quantity of high-value crops. Irrigation is not essential for most crops in humid areas, but it can improve profits. Much of the growth in humid-area irrigation appears to follow periods of drought.

Unlike the West, surface and groundwater appear ample for continued development in the 31 humid States. Because of the high value of Eastern irrigated crops and the relative abundance of water, continued expansion is expected. Over 70 percent of the humid States' irrigated acreage is located in the Southeast and Delta States. Other potential Eastern growth areas appear to be the Lake States and Corn Belt. *[Rajinder S. Bajwa, William M. Crosswhite, and John E. Hostetler (202) 786-1410]*



## **Agricultural Policy**

### **NEW LEGISLATION AFFECTS FARM PROGRAMS**

The current farm legislation, the Food Security Act of 1985, is in effect through the 1990 crops. Changing economic needs and various domestic and international conditions, however, have periodically prompted adjustments in specific provisions.

Recent Congressional action to reduce the mounting Federal deficit has resulted in changes in target prices, loan rates, and acreage reduction programs. The Budget Reconciliation Act (P.L. 100-203) and the Continuing Appropriation Resolution (P.L. 100-202) cut the anticipated Federal deficit by \$33.4 billion in fiscal 1988 and \$42.7 billion the following year. The bills mandate \$969 million in agriculture-related reductions in fiscal year 1988 and \$1.497 billion in fiscal 1989.

### **Federal Price Supports Reduced**

To lower Federal spending for agricultural price supports, target prices for the 1988 and 1989 crops were reduced about 1.4 percent from the levels mandated in the 1985 act. The basic loan rates for the 1988 program crops of wheat, feed grains, and rice were reduced by about 3 percent from 1987 levels.

For 1989 crops, the Budget Reconciliation Act limits reductions in the basic loan rate to 5 percent plus an additional 2 percent if the Secretary determines that the additional reduction is needed to maintain a competitive market position. Furthermore, the Secretary may reduce the basic loan rate for feed grains and wheat by an additional 20 percent to maintain market competitiveness.

The loan level for honey is reduced by 2 cents per pound for 1987, 3/4 cent for 1988, 1/2 cent for 1989, and 1/4 cent for 1990. The \$250,000 honey loan limitation is eliminated. The budget act also mandates savings of 1.4 percent for a number of non-target-price commodities, including tobacco, peanuts, sugar, and wool and mohair.

Savings for the sugar program for the 1988 crop will be achieved through a 1.4-percent reduction in loan proceeds to processors. Minimum support levels paid to producers will also be reduced 1.4 percent. The national average loan rates and market stabilization price will not be affected.

Outlays under the milk price support program will be reduced through a decrease of 2.5 cents per cwt in the price received by all producers for all milk produced in the United States and marketed for commercial use during 1988. The funds from such reductions will be submitted to the CCC.

USDA's authority to adjust price support loan rates for wheat and feed grains from county to county is limited to no more than the percentage change in the national average loan rate, plus or minus 2 percent, in 1988, 1989, and 1990.

### **Provisions Affecting Program Payments**

If a farm's program payment yield for the 1988-90 program crops is more than 10 percent below the 1985-crop level, the producer is entitled to an additional yield payment to compensate for up to 90 percent of the shortfall. The payment is to be made available at the same time as the final deficiency payment.

If the Secretary establishes acreage limitation or set-aside programs, wheat, feed grains, upland cotton, and

**Support Rates for 1987 and 1988 Crops**

Crop	Unit	Target price		Loan rate	
		1987	1988	1987	1988
Wheat	bu.	4.38	4.23	2.28	2.21
Corn	bu.	3.03	2.93	1.82	1.77
Sorghum	bu.	2.88	2.78	1.74	1.68
Barley	bu.	2.60	2.51	1.49	1.44
Oats	bu.	1.60	1.55	.94	.90
Rye	bu.	--	--	1.55	1.50
Upland cotton	lb.	0.794	0.759	0.5225	0.5180
ELS cotton	lb.	0.977	0.957	0.814	0.8092

**Non-Program Crop Support Prices, 1988**

Crop	Unit	Support price	
		Dollars	
Peanuts			
Quota crop	short ton	615.27	
Additional crop	short ton	149.75	
Milk			
With 3.67% milkfat	cwt	10.60	
With 3.5% milkfat	cwt	10.33	
Tobacco			
Flue-cured	lb.	1.442	
Burley	lb.	NA	
Wool and mohair	lb.	NA	

NA = Not announced.

rice producers can receive advance deficiency payments for the 1988-90 crops. Wheat and feed grain producers may receive between 40 and 50 percent of the expected payments in advance; cotton and rice producers, between 30 and 50 percent. The Secretary has set the 1988 advance payments at 40 percent for wheat, feed grains, upland cotton, and rice. One-half of this amount will be paid in cash at signup and the balance will be in generic commodity certificates on or about May 16.

For the 1987-90 wheat crop, the emergency compensation payments ("Findley payments") will be based on a projected June-May average price. Producers who request such payments will receive no less than 75 percent of the projected total by December 15.

**Acreage Base Reduced 10 Percent for Some Feed Grains**

Under the Budget Reconciliation Act, a voluntary paid land diversion program for the 1988 and 1989 crops of

corn, grain sorghum, and barley has been implemented. The diversion is limited to 10 percent of the crop acreage base. The payment rate is \$1.75 per bushel for corn, \$1.65 for grain sorghum, and \$1.40 for barley.

The Secretary can elect not to implement the paid land diversion program for the 1989 crops if it is necessary to maintain an adequate supply of corn, grain sorghum, or barley. A diversion program must also be implemented for the 1990 crop unless the Secretary determines it is not needed.

An optional diversion program for wheat and feed grains for 1988, 1989, and 1990 is authorized. The program provides for a 0/92 option whereby producers can receive 92 percent of their deficiency payments even if all of their base acreage is placed in conservation uses. No more than 50 percent of the base acreage of an individual county, however, can be retired through acreage reduction programs.

Grazing of land normally planted to wheat, feed grains, upland cotton, and rice, but idled under acreage reduction, paid diversion, or 0/92 programs,

is permitted except during a consecutive 5-month period between April 1 and October 31 as designated by the State Agricultural Stabilization and Conservation (ASC) Committee.

The Secretary has determined that haying will not be permitted for 1988, except under emergency conditions, unless the State ASC Committee submits evidence that haying will not have an adverse economic impact in the State. In the event of a natural disaster, unlimited haying and grazing may be permitted.

An acreage reduction program (ARP) for oats will not be implemented for the 1988, 1989, and 1990 crops in excess of 5 percent. The 5-percent requirement may be waived for the 1990 crop if the supply of oats is determined to be excessive.

**Payment Limitations Instituted**

The Budget Reconciliation Act made a number of changes in payment limitation provisions effective with the 1989 crops. In general, the new provisions require that persons receiving payments be actively engaged in farming and define what constitutes "actively engaged." The number of payment-receiving agricultural operations in which a person can have a substantial beneficial interest is also limited. Proposed regulations to carry out the new provisions must be issued by April 1, 1988, and final regulations must be issued by August 1, 1988.

No changes were made in the per-person dollar limitations. Deficiency and diversion payments continue to be limited to \$50,000 per person and total overall payments are limited to \$250,000 per person, including the \$50,000 deficiency and diversion payments.

**No Payments to Foreigners Unless They Farm in Person**

Other provisions of the Budget Reconciliation Act reflect the broad scope of agricultural legislation. Several sections, for example, relate to loan programs of the Rural Electrification Administration. The act also encourages greater use of ethanol as a motor fuel.

Beginning with the 1989 crop, foreigners may not receive payments unless

they are admitted to the United States as permanent residents and provide land, capital, and a substantial amount of personal labor. Any corporation or other entity with more than 10 percent foreign holdings is ineligible for payment unless its members are permanent residents and are actively engaged in the farming operation.

The State of Washington may conduct a demonstration project titled the Family Independence Program. Under this program, the Secretary of Agriculture is required to pay the State the actual cost assistance provided in lieu of food stamps.

#### *Continuing Appropriation Bill To Help Sunflower Oil Exports*

The Continuing Appropriation Resolution provides almost \$55 billion for agriculture in fiscal 1988. These appropriations cover the normal operations of the agencies and programs. Additional funds or mandates are given for export promotion, human nutrition, food safety, biotechnology, low-input agriculture, and water quality. The law, for example, provides for a new export bonus program for sugar from the Caribbean Basin Initiative nations and the Philippines.

About \$21 billion is appropriated to fund the CCC price support, conservation reserve, and other CCC programs in 1988. For the first time, a dollar cap was placed on CCC funding for 17 specific commodity programs. However, the CCC will be given authority to transfer some funds between accounts to avoid potential shortfalls next year.

The Continuing Appropriation Resolution also creates a 1-year export promotion program for sunflowerseed oil. USDA must buy \$10 million for use as a type of export bonus for overseas sale. [Kathryn L. Lipton and Susan L. Pollack (202) 786-1696]



### **Recent Publications**

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**Land Use and Soil Erosion: A National Linear Programming Model, TB-1742.** (Price \$2.00.) Stock Number 001-019-00567-0

### **Upcoming Releases from the Agricultural Statistics Board**

The following list gives the release dates of the major Agricultural Statistics Board reports that will be issued by the time the May *Agricultural Outlook* comes off press.

#### **April**

- 1 Tobacco
- 11 World Ag. Supply & Demand
- 14 Oil Crops
- Agricultural Resources
- 19 Agricultural Outlook
- 20 Dairy
- 26 Foreign Ag. Trade of the U.S.
- 28 World Food Needs & Available Abilities
- 29 National Food Review



## Alternative Agriculture Gains Attention

A new term is heard on and off the farm. It is "alternative agriculture," also known as "sustainable," "regenerative," "organic," or "low-input" agriculture. This article compares alternative and conventional agriculture. It looks at why and how alternatives to conventional agriculture are gaining attention, what will affect their adoption, and what changes they might bring.

### Alternative and Conventional Agriculture Compared

**The "alternative" approach.**—Alternative agriculture is another way of thinking about agriculture and its links with people and their environment. Sustainable, regenerative, organic, and low-input alternatives emphasize different ends and means. But all share the goal of an agriculture that produces an abundance of safe and nutritious food that is sustainable both economically and physically, and that has positive effects, or at least minimum adverse effects, on human health, natural resources, environmental quality, and rural communities. Conventional agriculture at times falls short of these goals.

Conventional agriculture is described in a recent memorandum by the Secretary of Agriculture as a system that is highly specialized and emphasizes high yields achieved by inputs of fertilizers, pesticides, and other off-farm purchases. Alternative farming systems, according to the memorandum, range from systems with only slightly reduced use of these inputs through soil tests, integrated pest management, and capital inputs, to systems that seek to minimize the use through appropriate rotations, integration of livestock with crops, mechanical/biological weed control, and less costly buildings and equipment.

Alternative agriculture addresses multiple objectives such as increasing profits and maintaining the environment. And it may incorporate and build on multiple systems and practices such as integrated pest management and soil conservation.

Most people think of alternative agriculture as different ways of producing traditional crops. It can also include alternative farm enterprises and non-farm services, from new crops and livestock products to aquaculture.

**The conventional approach.**—Conventional agriculture is a way of thinking, too. It emphasizes making a living from farming, and is characterized by capital-intensive monoculture, continuous cropping, and a substantial reliance on manufactured inputs and extensive use of credit.

Conventional "agri-culture" stresses production. It says "more is better." Economists know that the most profitable output on a farm is usually something less than maximum physical output—that at some point dollar returns from higher increments of output may not cover additional costs. But this is all too easily forgotten, even by economists.

The development and expansion of conventional agriculture were made possible and profitable by relatively low-priced petrochemicals, ample credit, suitable infrastructure, and the availability of research-based information and education assistance from land grant colleges and USDA. Farm price and income support policies, tax preferences for agriculture, and other public programs all have helped conventional agriculture.

**Different treatment of resources and environmental quality.**—Conventional agriculture does not ignore resource conservation or environmental quality. However, it tends to treat them as constraints on profit maximization. Take soil conservation. Traditionally, it has played second to production. If farmers see erosion cutting yields or incomes, then they adopt conservation measures. When conservation is socially desirable but not profitable for the farmer, the Government has provided financial and technical assistance.

Under alternative agriculture, farmers look for complementarities between conservation and production. Rotations can serve both goals. Average annual soil erosion from land planted to corn in one year, but to hay or a legume crop the previous year, is less than the erosion from the same land used to grow corn continuously. Rotations generate nutrients and can help control pests. Alternative agriculture consciously searches for complementarities, whereas conventional agriculture may treat unintended consequences as side effects.

For many farmers, conservation tillage has saved soil without sacrificing farm income. And yet, it may require increased use of herbicides. In such cases, a reduction in soil erosion has come at the cost of potential groundwater and surface water contamination. Proponents of conventional agriculture tend to cite conservation tillage as a victory and the herbicide problem as an unwanted but inevitable side effect. Proponents of alternative agriculture look for ways to increase conservation without more herbicides.

## Why and How Has Alternative Agriculture Gained Attention?

U.S. farmers have been acclaimed the most productive in the world. Crop yields, livestock production, and the number of people reportedly fed by one farmer have risen dramatically in recent decades. And as the 1980's began, exports of farm products were making an enormous contribution to the U.S. balance of payments. Conventional agriculture was a growing source of national pride.

But the price of this success was high: soil erosion with substantial off-site damages, as well as higher fertilization to offset erosion-based yield losses; contamination of surface and groundwater from pesticides and fertilizer; soil compaction due to use of heavier and larger machinery; depletion of groundwater supplies and salinity problems resulting from irrigation; and the loss of fish and wildlife or their habitats due to chemical runoff and conversion of forests, range, and wetlands to crops. Some of these problems have recently come to light as a result of media attention, and of our increasing ability to classify and measure them.

Conventional agriculture's image peaked in the late 1970's as farmers planted fencerow to fencerow in response to growing exports. But the image tarnished in the early 1980's, as exports, commodity prices, and land prices turned down, causing severe financial stress to farming.

Consumer interests and concerns also changed. Use of pesticides and other chemicals caused consumers to worry about food safety. If conventional agriculture excelled at producing abundant food at reasonable prices, it sometimes seemed to do so at the expense of food and environmental quality.

These problems opened the door to alternative agriculture, and alternative agriculture is maturing as it responds. Until recently, if the term alternative agriculture were used at all, it probably meant organic farming, which was criticized as an unrealistic answer to the problems of conventional agriculture. Indeed, early proponents of organic farming appeared to set their sights on ending the use of chemicals without regard to profits.

But supporters of conventional agriculture who chided organic enthusiasts for being too emotional, and for even thinking that lower yields and wormy apples might be desirable, were just as emotional. To them, widespread adoption of organic farming in periods of strong demand for food promised shortages and, ultimately, posed the question, "how will we decide who is to starve?"

Most of the emotionalism that once surfaced at the mention of organic farming has now waned. Many farmers are reducing purchased pesticides and fertilizer not because of allegiance to organic or alternative agriculture, but to cut production costs. Farmers are more concerned with the environmental and health hazards conventional agriculture poses. Their own families and neighbors can be affected by contamination of farm wells. They are discouraged by the growing resistance of weeds and insects to pesticides. Some may regard restrictions on the use of agricultural chemicals as inevitable and are shifting to alternative views.

Awareness of the importance of profits has grown among supporters of alternative agriculture. The idealism of organic farming has been tempered by the realization that an

ecologically benign agriculture is sustainable in the long run only if it is profitable in the short run.

One version of alternative agriculture is called low-input agriculture. To most people this means reduced use of manufactured or purchased inputs, not a cutback in total input use. The approach usually involves the substitution of more management and labor for fewer pesticides and fertilizers.

Farmers see low-input agriculture as a way to reduce costs, maintain or increase income, and minimize debts. Substituting rotations and livestock enterprises for off-farm nutrient sources generally reduces on-farm and off-site damage caused by soil erosion, and protects wildlife habitats. Cultivation and other practices instead of chemical weed control, and biological pest management instead of chemical insecticides, help meet the goals of an environmentally benign agriculture.

## What Will Affect Adoption of Alternative Agriculture?

Let's look at some of the conditions and trends that could affect farmers' decisions to adopt alternative agriculture.

*Commodity and input prices.*—Rising foreign demand for farm commodities could intensify conventional production on a larger acreage. A rise in energy prices, in contrast, would encourage alternative agriculture by reducing the profitability of conventional pesticide and fertilizer use.

*Farm and environmental policies.*—Commodity programs encourage conventional specialization and intensification in crops considered erosive. Base acreage provisions could penalize farmers for shifting to rotations by reducing the eligible program acreage. Program payments tied to historical yields deter to adoption of alternative agriculture when it is accompanied initially by lower yields.

Environmental protection policies tend to favor alternative farming approaches. Under the Conservation Reserve Program initiated in the 1985 Food Security Act, some 23 million acres have been taken out of erosive crop production and placed under permanent grass or trees. The reserve supports resource conservation, a goal shared by alternative agriculture.

*Infrastructure and markets.*—Wide adoption of alternative approaches could require changes in infrastructure and in input and product markets. New markets might be required for nutrients not now being bought or sold. New marketing channels would be needed so farmers could benefit from premium prices for organically-grown or pesticide-free foods.

Expansion of alternative agriculture may require new information and services on everything from weather to marketing options. Past experience with integrated pest management (IPM) illustrates the point. To use IPM, farmers need not only more and better weather information, but also insect scouting services.

*Transition costs.*—Shifting from conventional to alternative agriculture involves some indirect costs to farmers. The transition may involve a drop in yields and lower revenue

for several years, despite reduced production costs. Farmers who cannot accept the risk of an initial income reduction will hesitate, or perhaps convert part of the farm at a time.

Alternative agriculture is not a return to older and simpler methods; it calls for even more information and more sophisticated management as substitutes for other inputs, particularly agricultural chemicals.

Adoption could be slower on farms with limited management and labor, and with substantial, remunerative off-farm employment. Some farmers may be reluctant to increase their dependence on labor (whose uncertain supply in the past explained farmers' shifting to mechanical-chemical inputs). Farmers more likely to adopt alternative agriculture are those who have access to reliable labor and opportunities to hire skilled management if necessary.

Adoption of alternative approaches might be slowed by heavy investments in machinery, buildings, and other fixed assets. Farmers who would incur financial losses when terminating the use of such assets may delay conversion.

**Research and education.**—Research and extension education have been major factors behind the expansion of conventional agriculture, but this is changing. The land grant colleges and USDA have begun to expand alternative agriculture programs. Until recently, farmers did most of the research and experimentation on alternative agriculture, sharing results through informal networks, publications, and field days.

Alternative or sustainable agriculture centers, institutes, and foundations are popping up at land grant colleges in Iowa, Wisconsin, California, and other States. A growing number of colleges have established alternative agriculture chairs and courses.

The 1988 agricultural appropriation includes \$3.9 million for research and education on low-input farming, under a provision in the 1985 Food Security Act (the Agricultural Productivity Act under the Research and Education Title). Appropriation of any new Federal money, given the current budget deficits, signals unusual Congressional interest and support.

The program will be administered by USDA's Cooperative State Research Service with help from agricultural experiment stations and extension leaders in each region, a USDA interagency Research and Education subcommittee, and non-Government organizations. The funds will be used mainly for innovative research and extension projects at regional and State levels to help farmers identify and adopt low-input approaches.

These developments should not be expected to bear fruit overnight. Given the scope and complexities of alternative agriculture, expansion of research and education will take time. We know far too little about the relative profitability of alternative farming approaches. Information about which farms have shifted to alternative agriculture, and with what results, has been mostly anecdotal.

### ***Changes Are Gradual But Far-Reaching***

Current developments do not indicate a wholesale departure from conventional agriculture, but rather a growing diversity of farming systems. Future agriculture likely will put more emphasis on conservation, environmental quality, human health, and food quality than did the conventional agriculture of recent decades.

Adoption requires skilled management. Medium-sized farms might well be among those most likely to have, acquire, or hire the management and labor required by alternative approaches. This could change the bimodal trend toward larger and smaller farms. Contrary to the view that alternative agriculture is small-scale farming, operators of smaller farms with off-farm employment might have the least incentive to convert.

If many crop farms diversify into livestock, changes would be expected in livestock production and marketing, as well as feed production and distribution. But these changes need not be dramatic because alternative ways of producing crops need not require livestock. Plant nutrients can come from legumes, purchased manure, and other natural sources. However, the most efficient way to market hay and other rotation crops on many farms could be through livestock.

The diversification of crops, livestock, and other enterprises could have significant impacts on prices of farm products and the economic viability of rural areas. While the diversity could run counter to the economic benefits of specialization, it might reduce the accompanying risks. That is, it could dampen the price-depressing effects of a large number of farmers responding to unfavorable markets for a dominant commodity by switching to the same alternative commodity. Prices, and profits, could become less volatile.

Changes in rural economies would occur as farmers shift to new crops and to recreation or other enterprises. Nonfarm rural economic activities would be affected if more farmers turn full-time to alternative agriculture, curtailing their off-farm employment. These possibilities point to a growing need for research and education on the links between alternative farming approaches, food and fiber markets, the environment, and rural communities, and how each might be affected by significant adoption of alternatives to conventional agriculture. [Neill Schaller (202) 786-3313]



## World Commodity Markets: Conflict and Resolution

The United States is at a crossroads in global commodity markets. Following rapidly growing commodity trade under highly favorable prices in the late 1970's, the early 1980's saw growing surpluses, declining trade and prices, and in many instances, large Government transfers to agriculture.

But global commodity markets continue to reflect the conflict between integrated world economies and the independent pursuit of political and production objectives. Trade negotiation can help resolve this conflict.

The multilateral agricultural trade negotiations under the auspices of the General Agreement on Tariffs and Trade (GATT) provide an opportunity to improve the performance of global commodity markets, where competitiveness is related to comparative advantages.

### *Agricultural Policies Distort Economic Environments*

Developed countries generally subsidize their farmers, while developing and centrally planned economies implicitly tax theirs. Such interventions prevent transmission of international price signals to domestic markets. This helps to explain why surpluses accumulate in some developed countries—the United States, European Community, and Japan—while shortages appear in the developing and centrally planned economies.

The failure of domestic policies to consider global impacts results in disequilibrium in world agricultural markets. The European CAP, which now creates large deficits for the EC, generated revenue when European countries were net importers of agricultural commodities. However, that policy contributed to substantial production increases, made

Europe a surplus producer and major exporter, and helped drive world prices down. Export restitutions have become 70 percent of the EC budget.

In the United States, 1981 farm legislation implemented an agricultural policy of higher prices and increased production. The policy reduced U.S. competitiveness in world markets and resulted in record stocks and farm subsidy payments.

Against the high program incentives and surpluses of developed economies are the implicit agricultural taxes and shortages of the developing and centrally planned economies. Slowed economic growth and heavy international debt can keep these countries from importing enough to meet food needs.

Agriculture has not participated in the world trade liberalizing that has been prevalent since World War II. In fact, many domestic agricultural policies have been exempt from the GATT. Tariffs in industrialized countries on manufactured goods declined from 40 percent in 1960 to 6-8 percent by 1974. After the Tokyo Round of GATT (1974-79), they fell another third. However, nominal rates of protection for agricultural commodities in industrialized countries rose from 21 percent to 28 during 1965-74.

Under the Uruguay Round of GATT (1987-92), explicit and implicit agricultural subsidies are being examined. However, agricultural policies are traditionally considered to be domestic, which will make modifications difficult.

### *Macroeconomic Factors Affect World Commodity Markets*

Institutional developments outside agriculture have altered the agricultural environment and emphasized previously neglected issues. What happens outside of agriculture is now as important as domestic agricultural policy.

The changes in the agricultural environment include the growing integration of the world economy, the development of a well-integrated world capital market, and flexible exchange rates. When exchange rates are flexible, national monetary and fiscal policies work through them more than through interest rates. Therefore, policies have relatively more effect on trade-intensive sectors such as agriculture than on most manufacturing.

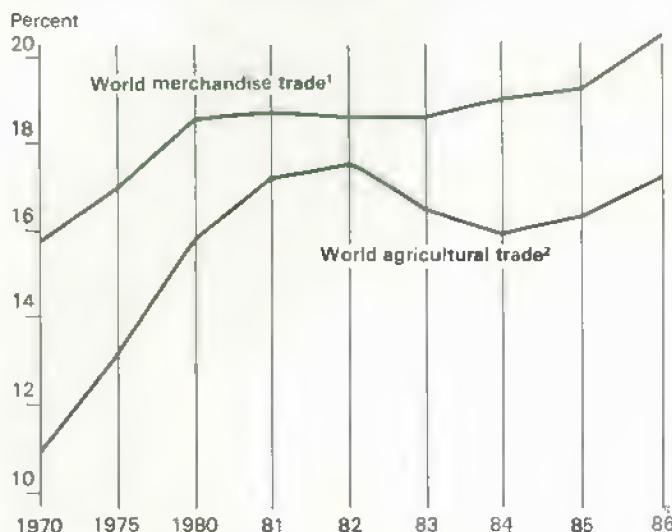
With the exception of a few recession years, world trade has grown substantially faster than world Gross Domestic Product (GDP) since World War II. Exports increased from 16 to almost 21 percent of GDP between 1970 and 1986.

Agricultural trade dependence grew more during 1973-82, when high world prices for commodities tended to nullify price support programs, and grew less when low world prices induced substantial government intervention.

Growing interdependence implies growing specialization, with implications for increasing world efficiency and for free trade based on comparative advantage.

A well-integrated world capital market has emerged along with the integrated world trade. This is associated with an increasing dependence on trade, movement away from the gold standard, periods of substantial market disequilibrium, and the desire of bankers and financiers to escape the growing regulation of domestic financial markets.

## World Agriculture Relies Increasingly on Trade



<sup>1</sup>World merchandise exports as a percent of world gross domestic product.

<sup>2</sup>World agricultural exports as a percent of world agricultural gross domestic product

Immediately after World War II, international capital movements were almost exclusively related to trade or to government-to-government transfers. In the 1960's, the Eurodollar market emerged in response to sustained U.S. balance-of-payment deficits, and it broadened in the 1970's to include all major European currencies. Besides New York and London, extensive Asian markets developed in Hong Kong and Singapore, and Latin American markets in Panama and the Bahamas. Secondary markets also emerged, typically in small island states. The inflow of petrodollar deposits associated with the oil shocks greatly accelerated growth of these markets.

Given the current towering magnitude of private assets and transactions, it is hard to imagine how any government or set of governments could significantly alter world financial flows. In mid-1987, offshore bank deposits exceeded \$4 trillion, compared with total world exports of approximately half that. International financial flows are estimated in excess of \$40 trillion per year, or more than 20 times that of trade flows. Financial flows now dominate trade flows in determining short-term currency movements.

The move toward flexible exchange rates was an outcome of the international capital markets and the growing magnitude of private transactions. Under the older, fixed exchange rates, monetary and fiscal policies affected interest rates and inflation. Under flexible exchange rates, the major effect of macro policies is on exchange rates and intercurrency capital flows. The resulting financial changes induce changes in trade of goods and services. Thus, an easy monetary policy can reduce a country's exchange rate and increase the competitiveness of its agriculture and other export-based industries.

### Third World Debt Influences Global Commodity Trade

Third World debt is inextricably linked to the integration of world capital markets. The debt is one of today's most serious constraints to trade and development, and could

plague the world economy for some years to come. Resolution of this problem is a requirement for the return of normal world trade.

Third World countries are increasing their food production. But with populations rising and per capita consumption growing, use is climbing faster than production. This would brighten prospects for global agricultural exports if economic growth generated enough revenue to pay for both increased food imports and debt payments. However, despite the recovery from the 1981-82 recession, debt-affected developing countries are still having difficulties paying for needed imports.

The overaccumulation of debt has had several major consequences. For the developing countries, there has been a decline in per capita income growth and a reduction in imports. At the same time, export revenues have not grown as expected, partly because increased competition for export markets has caused commodity prices to fall.

Renewed growth in developing countries requires investment in new industries or in existing export industries. The withdrawal of credit has been accompanied by, and paid for by, reductions in gross domestic capital. Renewed growth depends on increased exports. But, if enough countries are simultaneously reducing their capital formation and imports, increased export sales become extremely difficult. Such has been the case since 1982. The debt burden has been reduced during the last 2 years, however. This holds out the promise that over time the world can get the debt problem behind it.

### Global Demand Declines While Supply Increases

There is less growth in global demand for farm products. Population growth has slowed except in low- and middle-income developing countries, where it has stayed the same. Real per capita income growth is continuing its decline for all groups except the centrally planned economies. Export growth has declined except for low-income and centrally planned economies.

While annual per capita agricultural production rose 0.5 percent between 1950 and 1986, total production grew at an average 2.4 percent per year. In 1987, production was below the long-term growth rate, and this is expected to continue into 1988. This growth was not evenly distributed; some countries or regions have become surplus producers while others have rising food deficits.

Technical and institutional changes underlie increases in agricultural production. There were substantial increases in area for major crops earlier in the century. But most production increases over the last 15 years are due to increasing yields. There is little reason to project much change over the coming decade or more.

Changes in global demand are more likely to dominate future trade patterns than changes in global supply are. However, regional shifts in both demand and supply will continue to be important as world integration and specialization continue. Demand depends on how and when the conflicts in global agricultural markets are resolved. We will consider two possible scenarios. The first assumes continued world integration, but with no major agricultural trade liberalization. We will contrast this with a second scenario reflecting substantial agricultural trade liberalization.

### **Scenario I: Without Major Liberalization Of Agricultural Trade**

Even if there is little multilateral movement toward trade liberalization, trade growth is now moving back to its long-term trend. Substantial balance-of-payments and policy adjustments have occurred in the 1980's based on excessive borrowing and rapidly growing international trade. Adjustments have included substantial curtailment of imports, income growth, and investment. Significant steps in resolving the world debt problem have been taken. Even so, current surpluses imply relatively low agricultural prices. Thus, under this scenario, we can expect:

- somewhat slower supply growth than over the last decade,
- somewhat faster consumption growth than during the 1980's,
- a shift of the production/consumption balance so that large stocks of grains gradually diminish, and
- growth in world trade, rising toward historical rates.

Improvement is the key feature of this scenario. For major commodities such as wheat and coarse grains, large stocks will be consumed, and the supply/demand balance changes will continue to strengthen prices received by farmers.

Total agricultural production likely will grow more slowly than the long-term rate of 2.4 percent over the next 5-10 years, for several reasons:

- The rapid 4- to 7-percent annual growth rates for countries like Libya, Saudi Arabia, Ivory Coast, Malaysia, and China will go unmatched during the coming decade.
- Relatively low world prices and slower growth in demand probably will slow yield growth. Average yields for wheat and rice probably will climb at a slower pace than in the past 15 years, slowing from 2.6 to 2.1 percent. In the last 15 years, high-yielding wheat and rice varieties rapidly expanded. The growth in coarse grain yield may also slide below its 2.3-percent historic rate.
- Relatively low world prices are likely to discourage countries with rapidly expanding production and self-sufficiency, such as India, from becoming agricultural exporters.
- Relatively low world prices will deter output expansion in other countries, particularly those with high costs of production.

The Soviet push for greater efficiency probably will result in some restructuring and output gains. In the EC, analysts expect continuing cutbacks in production incentives and a slowing of output growth.

World demand for agricultural products over the next 5 years will grow more slowly than during the boom of the 1970's, but somewhat faster than in the past 5 years. Several conflicting forces shape this outlook:

- World population growth peaked during the 1960's at nearly 2 percent a year. Although the trend to slower

population growth, now about 1.6 percent a year, is expected to continue, there will still be about 80 million more people to feed and clothe each year.

- Many countries will experience slower income growth than in the 1970's. But income is likely to grow faster than in the early 1980's, particularly in developing countries.
- Most commodities will be available on world markets at relatively low real prices, frequently with favorable credit terms.
- The debt problem will lessen, but will continue to constrain both income and import demand in debtor countries until it is fully resolved.

Agricultural demand growth will be fastest in the developing countries, particularly in the newly industrialized countries. An FAO study projected that developing country agricultural demand will grow 3 percent per year, well above the rate of middle-income countries. Demand growth will continue to be strong in the centrally planned economies, notably in China.

Long-term shifts in the structure of world demand will continue. People will become more concerned about the quality of their diets. Consumption will continue its gradual shift toward higher valued and processed products, particularly in developing countries. Distribution and processing margins will account for a growing share of total food expenditures.

A growing demand for feedstuffs will reflect desires for more animal protein in human diets. Developing countries, with 35 percent of their cereal now used as feed, will likely increase that percentage. Many middle-income developing countries will maintain their policies to import feed grains rather than meat.

World demand for high-protein feedstuffs will rise even faster than for feed grains. Livestock feeding in the centrally planned economies is inefficient, principally because of the low-protein feed rations. In the USSR the ratio of oil meals to feed grain is only 5 percent (7 percent for all European centrally planned economies), compared with 17 percent in the United States.

### **Continued Trade Recovery Expected**

Given this scenario of continued world integration with little change in trade policies, world trade in agricultural products should continue recovering. World trade in farm products may expand 3-4 percent per year, below the 4-5 percent of the 1970's but well above the stagnation of the early 1980's.

World demand for wheat should continue to show strong growth, particularly in the developing and centrally planned countries. China will account for the largest gains. With consumption growing, the several-year-old recovery of world wheat trade will continue. World trade has recovered 18 of the 22-million-ton drop of 1985/86. Although gains will be slower, an upward trend is clear. World wheat trade will probably show average growth of about 3 million tons over the next 5 years, only slightly slower than the pace of the 1970's and early 1980's.

The projected income, population, consumer preferences, and policies suggest that demand for livestock products will expand at a somewhat slower rate than in the 1970's. Beef will continue to dominate world trade in meat, but poultry trade should expand, with the major poultry meat importers of North Africa and the Middle East, together with several Asian markets, providing much of the gains. Poultry likely will account for virtually all of the increase.

Growing feed use will account for all of the gains in coarse grain trade. Large gains in feed use are expected in Mexico, North Africa and the Middle East, and East Asia, as poultry and livestock satisfy the meat demand generated by growing populations and income. Large feeding gains are expected in the centrally planned economies too.

Developing-country markets, where consumption is rising, are particularly likely to increase feed imports, as will China and Asia's newly industrialized countries. World coarse grain trade has showed virtually no increase after its precipitous decline in 1984/85, but is likely to increase by 2-3 million tons a year, roughly half the rate of the 1970's.

Growing world demand will expand trade in oilseeds and products, although growth will be restrained by the EC's continuing move toward self-sufficiency. Trade gains for both oilseeds and meal will be well below the long-term average of more than 1 million tons annually. The strongest growth in import demand is likely to come from the centrally planned economies, whose increasing oilseed and protein meal imports will enable them to use feed grains more efficiently.

World cotton trade had a different pattern over the last 2 years. Trade jumped to a record level, world stocks dropped precipitously, and prices strongly recovered. With trade already high and consumption growing slowly, world cotton trade will expand modestly over the next 5 years. Trade grew by only about 100,000 bales a year during the 1960's and 1970's. Growth in coming years is unlikely to greatly exceed those gains. Prospects for cotton trade are closely linked to restraints on world textile trade. Increasing barriers to textile trade will mean a smaller volume of world cotton trade and lower prices.

#### *Excess Capacity Remains*

While stocks are beginning to drop and prices are beginning to strengthen, excess agricultural capacity is likely to remain a basic feature of world agriculture for the next few years—particularly among the industrial-country exporters. FAO has concluded that growth of agricultural production in the developed-market economies would need to be cut to approximately 1 percent per year, half of the projected expansion, to balance output with domestic and export demand.

Under 1981 farm legislation, the United States was the residual supplier of world exports. This changed with the 1985 Food Security Act. The United States idled a significant share of cropland, lowered its market price, and aggressively began to expand exports. Acreage and production of grains were reduced in Australia and Argentina, and budget pressures led to some small adjustments in agricultural support prices in the EC.

But these are only partial solutions. No one country can make the adjustments necessary to balance the world. Each country tries to meet the conflicting objectives of

supporting farm income, avoiding unwanted surpluses, avoiding trade conflicts, containing budget expenditures, and bringing more economic rationality to domestic and world agriculture. One hope for progress toward these objectives is to move ahead in the multilateral GATT framework to establish a rational world agricultural system based on open trade and comparative advantage.

#### *Scenario II: How Would Trade Liberalization Affect Prices?*

In the Uruguay Round of GATT negotiations, the United States proposed eliminating all forms of trade-distorting government support to agriculture over a 10-year period. Analyses by ERS, International Institute for Applied Statistical Analysis (IIASA), OECD, and World Bank suggest the following effects of reducing government intervention in agriculture in developed countries.

- Total agricultural trade would increase for beef, rice, and sugar.
- Most world commodity prices would rise and stabilize, especially for sugar, dairy products, and meats. Price increases would reduce consumption and stimulate production in the lower income countries. But price increases would compensate for the reduced subsidies in countries with high protection.
- The composition of producer incomes in the United States, EC, and Japan likely would change. Export-based incomes likely would increase, while government support would decline.
- For every dollar that producers lost because of liberalization, consumers and taxpayers would gain more than a dollar. The net gain in the EC and Japan would probably be larger than in the United States. Most of the gain in the United States would be from reduction in Government budgets, while for the EC and Japan the gains would mean lower prices to consumers. Total world welfare gains would be in excess of U.S. \$100 billion.
- Agricultural export earnings of the Third World countries would improve, strengthening their trade role.

In a more open trade environment, competitiveness would depend on efficient production and marketing. For wheat, average nonland production costs are lower in Argentina and Australia than in Canada, the United States, and the EC. With adjustments in land use, costs would tend to equalize.

Reducing constraints on agricultural trade would help rid commodity markets of sustained imbalances. Excess capacity in world agriculture indicates the need to achieve structural change and create farms which are profitable without excessive support and which, at international and economy-wide levels, lead to more rational use of resources.

An important policy issue for the next decade is how to facilitate the flow of resources both into and out of the agricultural sector. The pressure to adjust production is likely to restructure resource use within the agricultural sector as well as transfer resources to and from other sectors. This not only implies shifts between existing sectors, but also the creation of new ones. [B. H. Robinson (202) 786-3300, M. D. Shane (202) 786-1668, and Fred Suris (202) 786-1824]

# AGRICULTURAL OUTLOOK



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# Statistical Indicators

## Summary Data

Table 1.—Key Statistical Indicators of the Food & Fiber Sector

	1987				1988				1988 F
	II	III	IV	Annual	I F	II F	III F	IV F	
Prices received by farmers (1977=100)	128	128	128	127	128	128	126	--	127
Livestock & products	149	150	144	146	142	142	140	--	142
Crops	106	105	113	106	112	110	110	--	111
Prices paid by farmers (1977=100)								--	
Prod. items	147	149	151	147	149	154	153	--	153
Commodities & services, int., taxes, & wages	162	164	166	162	165	169	169	--	168
Cash receipts (\$ btl) 1/	130	139	136	134	145	132	140	--	134-139
Livestock (\$ btl)	72	79	76	74	73	70	75	--	71-74
Crops (\$ btl)	58	60	61	59	72	62	64	--	64-67
Market basket (1967=100)								--	
Retail cost	303	305	306	303	--	--	--	--	--
Farm value	245	245	235	240	--	--	--	--	--
Spread	336	341	347	340	--	--	--	--	--
Farm value/retail cost (%)	30	30	30	30	--	--	--	--	--
Retail prices (1982-84=100)								--	
Food	113	114	114	114	114	115	116	--	--
At home	112	112	112	112	112	112	113	--	--
Away-from home	116	118	119	117	120	122	123	--	--
Agricultural exports (\$ btl) 2/	6.5	6.9	8.5	27.9	8.7	7.7	7.6	9.0	32.5
Agricultural imports (\$ btl) 2/	5.3	4.8	5.2	20.6	5.5	5.0	4.8	5.0	20.5
Production: 3/									
Red meat (mil lb)	9,238	9,624	10,102	38,449	9,630	9,418	9,703	9,617	38,368
Poultry (mil lb)	4,932	5,193	5,112	19,770	4,930	5,330	5,445	5,230	20,935
Eggs (mil doz)	1,438	1,439	1,478	5,796	1,450	1,435	1,415	1,465	5,765
Milk (mil lb)	37.4	35.5	34.7	142.5	36.2	38.2	36.4	35.2	146.0
Consumption, per capita:									
Red meat and poultry (lb)	52.5	53.8	56.9	215.0	53.7	54.4	55.5	56.3	219.8
Corn beginning stocks (mil bu) 3/	8,248.2	6,332.2	4,881.7	4,881.7	7,766.9	--	--	--	--
Corn use (mil bu) 3/	1,816.5	1,451.0	2,179.4	7,409.8	--	--	--	--	--
Prices: 4/									
Choice steers--Omaha (\$/cwt)	68.60	65.04	64.31	64.60	66-67	65-68	62-68	63-69	63-69
Barrows and gilts--7 mts. (\$/cwt)	56.18	58.97	43.51	51.69	44-45	43-47	41-47	39-45	41-47
Broilers--12-city (cts/lb)	48.2	48.7	42.5	47.4	44-45	43-47	42-48	39-45	41-47
Eggs--N.Y. Gr. A large (cts/doz)	58.9	63.5	59.2	61.6	56-56	53-57	60-66	63-69	57-63
Milk--all at plant (\$/cwt)	12.07	12.33	12.83	12.53	12.10-	11.00-	11.35-	11.95-	11.50-
Wheat--Kansas City HRW (\$/bu)	2.94	2.65	2.86	2.72	2.30	11.60	12.05	12.65	12.10
Corn--Chicago (\$/bu)	1.82	1.68	1.74	1.64	--	--	--	--	--
Soybeans--Chicago (\$/bu)	5.37	5.16	5.36	5.19	--	--	--	--	--
Cotton--avg. spot mkt. (cts/lb)	64.7	73.5	66.8	53.2	--	--	--	--	--
	1980	1981	1982	1983	1984	1985	1986	1987 P	1988 F
Gross cash income (\$ btl)	143.3	146.0	150.6	150.4	155.1	156.9	152.0	156	155-169
Gross cash expenses (\$ btl)	109.1	113.2	112.5	113.3	116.3	109.6	100.1	99	100-104
Net cash income (\$ btl)	34.2	32.8	38.1	37.1	38.8	47.3	52.0	57	50-55
Net farm income (\$ btl)	16.1	26.9	23.5	12.7	32.0	32.3	37.5	45	40-45
Farm real estate values (1977=100) 5/	145	158	157	148	146	128	112	103	--

1/ Quarterly data seasonally adjusted at annual rates. 2/ Annual data based on Oct.-Sept. fiscal years ending with year indicated.

3/ Dec.-Feb. first quarter; Mar.-May second quarter; June-Aug. third quarter; Sept.-Nov. fourth quarter; Sept.-Aug. annual. Use includes exports and domestic disappearance. 4/ Sample averages. 5/ As of February 1. P = preliminary. F = forecast. \* = commercial production.

# U.S. and Foreign Economic Data

Table 2.—U.S. Gross National Product & Related Data

	Annual		1986		1987			
	1985	1986	1987 P	IV	I	II	III	IV R
	\$ billion (quarterly data seasonally adjusted at annual rates)							
Gross national product	4,010.3	4,235.0	4,487.7	4,288.1	4,377.7	4,445.1	4,524.0	4,604.0
Personal consumption expenditures	2,629.4	2,799.8	2,967.0	2,858.6	2,893.8	2,943.7	3,011.3	3,019.2
Durable goods	368.7	402.4	413.8	419.8	396.1	409.0	436.8	413.1
Non durable goods	913.1	939.4	981.6	946.3	969.9	982.1	986.4	988.1
Clothing & shoes	157.2	167.5	177.1	169.6	174.0	175.8	178.7	179.9
Food & beverages	472.8	497.8	514.7	507.5	514.8	515.0	514.0	514.9
Services	1,347.5	1,458.0	1,571.6	1,492.4	1,527.7	1,552.6	1,588.1	1,617.9
Gross private domestic investment	641.6	671.0	716.7	660.2	699.9	702.6	707.4	756.8
Fixed investment	631.6	655.2	671.3	666.6	648.2	662.3	684.5	690.1
Change in business inventories	10.0	15.7	45.4	-6.4	51.6	40.3	22.9	66.7
Net exports of goods & services	-79.2	-105.5	-120.3	-116.9	-112.2	-118.4	-123.7	-126.9
Government purchases of goods & services	818.6	869.7	924.3	886.3	896.2	917.1	929.0	954.8
1982 \$ billion (quarterly data seasonally adjusted at annual rates)								
Gross national product	3,607.5	3,713.3	3,820.3	3,731.5	3,772.2	3,795.3	3,835.9	3,877.9
Personal consumption expenditures	2,352.6	2,450.5	2,496.3	2,480.5	2,475.9	2,487.5	2,520.7	2,500.9
Durable goods	352.7	383.5	388.1	399.0	375.9	385.4	406.9	384.3
Non durable goods	849.5	877.2	877.0	880.3	883.2	879.0	875.7	869.9
Clothing & shoes	147.9	158.0	159.6	158.4	160.4	157.3	161.7	158.9
Food & beverages	436.5	444.9	440.3	444.0	447.5	441.6	437.1	434.8
Services	1,150.4	1,189.8	1,231.2	1,201.1	1,216.9	1,223.1	1,238.1	1,246.6
Gross private domestic investment	636.1	654.0	686.1	631.0	671.8	673.7	681.9	717.2
Fixed investment	628.7	640.2	644.2	645.4	624.2	634.7	657.3	660.5
Change in business inventories	7.4	13.8	42.0	-14.4	47.6	39.0	24.6	56.7
Net exports of goods & services	-108.2	-145.8	-135.7	-151.8	-135.2	-132.7	-138.4	-136.4
Government purchases of goods & services	726.9	754.5	773.6	771.8	759.6	766.7	771.7	796.3
GNP implicit price deflator								
% Change	3.2	2.6	3.0	.7	4.2	3.5	2.8	2.7
Disposable personal income (\$ bili)	2,841.1	3,022.1	3,181.5	3,061.6	3,125.9	3,130.6	3,195.3	3,274.2
Disposable per. income (1982 \$ bili)	2,542.2	2,645.1	2,676.7	2,656.7	2,674.6	2,645.5	2,674.7	2,712.1
Per capita disposable per. income (\$)	11,872	12,508	13,049	12,626	12,865	12,858	13,090	13,381
Per capita dis. per. income (1982 \$)	10,622	10,947	10,979	10,956	11,008	10,865	10,958	11,083
U.S. population, total, incl. military abroad (mil)	239.3	241.6	243.8	242.5	243.0	243.5	244.4	244.7
Civilian population (mil)	237.0	239.4	241.5	240.2	240.7	241.3	241.8	242.4
Annual								
	1985	1986	1987 P	Jan	Oct	Nov	Dec	Jan P
	Monthly data seasonally adjusted							
Industrial Production (1977=100)	123.7	125.1	129.8	126.2	132.5	133.0	133.6	133.8
Leading economic indicators (1967=100)	168.6	179.3	189.9	185.5	192.8	190.7	191.3	190.2
Civilian employment (mil. persons)	107.2	109.6	112.4	111.0	113.2	113.5	113.7	114.1
Civilian unemployment rate (%)	7.1	6.9	6.1	6.7	6.0	5.9	5.8	5.8
Personal income (\$ bili) annual rate	3,327.0	3,534.3	3,746.3	3,631.5	3,855.2	3,839.3	3,866.4	3,878.6
Money stock-M2 (daily avg) (\$bil) 1/	2,569.5	2,807.8	2,902.2	2,827.8	2,895.2	2,897.7	2,902.2	2,925.9
Three-month Treasury bill rate (%)	7.48	5.98	5.82	5.45	6.40	5.81	5.80	5.90
Aaa Corporate bond yield (Moody's) (%)	11.37	9.02	9.38	8.36	10.52	10.01	10.11	9.88
Housing starts (thous) 2/	1,742	1,805	1,621	1,804	1,538	1,661	1,404	1,377
Auto sales at retail, total (mil)	11.0	11.4	10.3	8.1	9.3	9.9	10.9	10.4
Business inventory/sales ratio	1.54	1.54	--	1.55	1.49	1.51	1.50	--
Sales of all retail stores (\$ bili)	115.0	121.2	125.5	118.0	125.6	126.0	127.5 P	128.1
Non durable goods stores (\$ bili)	71.8	73.9	76.9	74.6	77.0	77.2	77.8 P	77.8
Food stores (\$ bili)	23.7	24.6	25.3	24.8	25.2	25.1	25.1 P	25.0
Eating & drinking places (\$ bili)	11.1	12.1	12.7	12.9	12.5	12.7	13.1 P	12.9
Apparel & accessory stores (\$ bili)	6.2	6.7	7.1	6.7	7.1	7.1	7.2 P	7.2

1/ Annual data as of December of the year listed. 2/ Private, including farm. P = preliminary. R = revised.

Information contact: James Malley (202) 786-1782.

Table 3.—Foreign Economic Growth, Inflation, &amp; Export Earnings

	Average 1970-74	Average 1975-79	1980	1981	1982	1983	1984	1985	1986	1987 <sup>1</sup> P	1988 <sup>2</sup> F
Annual Percent Change											
Total foreign											
Real GNP	5.5	3.7	2.6	1.6	1.7	2.0	3.2	3.0	2.7	2.8	2.5
CPI	10.2	14.0	16.9	15.6	14.4	18.4	22.5	21.6	11.4	16.6	25.4
Export earnings	27.5	14.6	22.2	-2.7	-7.0	-2.4	5.4	1.8	12.3	16.2	10.4
Developed less U.S.											
Real GNP	4.8	3.1	2.4	1.4	1.1	1.9	3.4	3.3	2.4	2.6	2.3
CPI	8.4	9.4	10.9	9.6	8.0	6.0	5.1	4.7	2.7	2.6	3.1
Export earnings	23.9	14.9	17.0	-3.3	-4.3	-0.5	6.2	4.9	19.2	13.0	10.9
Centrally planned											
Real GNP	5.1	3.5	1.5	2.1	2.7	3.4	3.7	2.9	3.9	3.5	3.3
Export earnings	19.4	16.1	16.5	3.4	6.0	8.2	1.5	-5.1	7.3	6.7	7.7
Latin America											
Real GNP	7.4	5.1	5.3	0.7	-0.5	-2.7	3.3	3.6	3.7	2.3	-0.8
CPI	23.5	53.7	61.3	64.9	72.6	126.2	174.1	179.4	86.1	139.1	231.5
Export earnings	28.1	12.8	30.1	5.3	-10.0	-0.9	7.0	-6.1	-15.1	5.0	5.2
Africa & Middle East											
Real GNP	8.9	6.4	1.3	0.0	1.4	0.1	1.1	0.0	-1.2	0.1	1.7
CPI	8.7	16.4	24.6	17.3	12.9	16.7	19.4	11.2	12.0	14.9	12.7
Export earnings	49.6	43.2	37.9	-9.2	-19.7	-16.1	-8.0	-6.9	-25.7	9.2	10.2
ASIA											
Real GNP	6.0	6.8	6.3	6.6	3.6	6.6	5.4	4.0	5.8	5.9	5.4
CPI	13.0	8.4	16.4	14.1	7.3	7.7	8.5	5.2	4.4	5.7	6.1
Export earnings	30.1	19.4	27.8	6.8	-0.3	3.5	13.4	-1.6	7.0	25.8	13.3

P = preliminary. F = forecast.

Information contact: Timothy Baxter (202) 786-1688.

## Farm Prices

Table 4.—Indexes of Prices Received &amp; Paid by Farmers, U.S. Average

	Annual			1987					1988		
	1985	1986	1987	Feb	Sept	Oct	Nov	Dec	Jan R	Feb P	
Prices received											
All farm products	128	123	127	122	129	127	132	127	131	130	
All crops	120	107	106	99	104	106	120	113	115	110	
Food grains	133	109	102	102	101	108	113	114	116	129	
Feed grains & hay	122	98	85	78	83	86	88	92	93	96	
Feed grains	122	96	81	74	78	81	84	89	90	93	
Cotton	93	91	98	77	107	106	107	106	100	94	
Tobacco	153	138	130	126	137	137	137	137	134	134	
Oil-bearing crops	84	77	79	74	79	79	83	86	87	88	
Fruit, all	180	169	181	173	185	187	236	170	170	172	
Fresh market 1/	192	177	191	181	196	211	259	178	178	181	
Commercial vegetables	129	130	144	137	129	122	203	177	193	134	
Fresh market	122	123	147	137	129	118	225	195	223	136	
Potatoes & dry beans	124	114	127	128	100	95	93	89	93	94	
Livestock & products	136	138	146	144	152	147	143	141	147	150	
Meat animals	142	145	163	155	171	165	157	157	166	174	
Dairy products	131	129	129	133	131	133	133	131	129	127	
Poultry & eggs	119	128	108	115	112	99	105	98	101	95	
Prices paid											
Commodities & services											
Interest, taxes, & wage rates	163	159	162	--	--	165	--	--	165	--	
Production items	151	144	147	--	--	150	--	--	152	--	
Feed	116	108	103	--	--	105	--	--	112	--	
Feeder livestock	154	153	179	--	--	190	--	--	193	--	
Seed	153	148	148	--	--	149	--	--	149	--	
Fertilizer	135	124	118	--	--	121	--	--	121	--	
Agricultural chemicals	128	127	124	--	--	123	--	--	123	--	
Fuel & energy	201	162	161	--	--	168	--	--	161	--	
Farm & motor supplies	146	144	144	--	--	144	--	--	144	--	
Autos & trucks	193	198	208	--	--	213	--	--	213	--	
Tractors & self-propelled machinery	178	174	174	--	--	176	--	--	176	--	
Other machinery	183	184	185	--	--	188	--	--	188	--	
Building & fencing	136	136	137	--	--	138	--	--	138	--	
Farm services & cash rent	150	150	146	--	--	146	--	--	150	--	
Interest payable per acre on farm real estate debt	237	219	207	--	--	207	--	--	193	--	
Taxes payable per acre on farm real estate	133	134	136	--	--	136	--	--	138	--	
Wage rates (seasonally adjusted)	154	160	167	--	--	162	--	--	162	--	
Production items, interest, taxes, & wage rates	157	150	152	--	--	155	--	--	155	--	
Ratio: Prices received to Prices paid 2/	79	77	78	77	79	77	80	77	79	79	
Prices received (1910-14=100)	585	561	578	557	588	580	601	582	599	596	
Prices paid, etc. (Parity Index) (1910-14=100)	1,120	1,086	1,115	--	--	1,132	--	--	1,138	--	
Parity ratio (1910-14=100) 2/	52	51	52	--	52	51	53	51	52	--	

1/ Fresh market for noncitrus; fresh market and processing for citrus. 2/ Ratio of index of prices received for all farm products to index of prices paid for commodities and services, interest, taxes, and wage rates. Ratio derived using the most recent Prices Paid Index. Prices paid data will be published in January, April, July, and October. P = preliminary. R = revised.

Information contact: National Agricultural Statistics Service (202) 447-5446.

Table 5.—Prices Received by Farmers, U.S. Average

	Annual 1/			1987					1988	
	1985	1986	1987	Feb	Sept	Oct	Nov	Dec	Jan	Feb P
<b>Crops</b>										
All wheat (\$/bu)	3.20	2.71	2.55	2.58	2.54	2.62	2.69	2.70	2.75	2.83
Rice, rough (\$/cwt)	7.85	5.04	4.49	3.84	4.28	5.68	7.09	7.37	7.70	7.85
Corn (\$/bu)	2.49	1.96	1.56	1.42	1.49	1.56	1.62	1.72	1.77	1.83
Sorghum (\$/cwt)	3.97	3.11	2.56	2.36	2.43	2.48	2.69	2.73	2.75	2.86
All hay, baled (\$/ton)	69.90	61.60	63.00	58.50	65.10	65.10	62.10	65.00	62.80	65.50
Soybeans (\$/bu)	5.42	5.00	5.07	4.68	4.99	5.04	5.36	5.63	5.73	5.90
Cotton, Upland (cts/lb)	56.1	54.8	59.4	46.4	64.9	64.1	64.9	64.2	60.6	57.1
Potatoes (\$/cwt)	3.92	5.03	4.47	4.93	3.91	3.82	3.59	3.57	3.75	3.69
Lettuce (\$/cwt)	10.90	11.90	14.80	8.62	16.30	13.30	42.20	34.80	35.60	11.90
Tomatoes (\$/cwt)	24.10	25.10	25.10	25.80	21.20	26.80	45.80	22.60	31.50	22.20
Onions (\$/cwt)	9.08	10.90	11.40	17.60	10.30	9.77	8.82	10.10	15.30	14.10
Dry edible beans (\$/cwt)	17.60	19.01	15.50	21.40	15.40	14.60	14.00	13.10	13.40	14.80
Apples for fresh use (cts/lb)	17.3	19.1	NA	19.9	18.0	14.3	12.5	11.8	11.5	12.8
Pears for fresh use (\$/ton)	349.00	372.00	217.00	366.00	239.00	196.00	211.00	147.00	135.00	193.00
Oranges, all uses (\$/box) 2/	7.41	4.42	4.55	4.83	6.01	7.36	10.23	5.45	6.19	6.24
Grapefruit, all uses (\$/box) 2/	4.01	4.29	5.00	4.72	5.52	5.07	6.81	5.84	5.34	5.25
<b>Livestock</b>										
Beef cattle (\$/cwt)	54.00	52.80	61.40	58.80	63.70	62.90	62.00	62.20	65.40	67.90
Calves (\$/cwt)	62.40	60.90	78.10	70.60	85.90	81.40	82.90	83.10	86.20	93.10
Hogs (\$/cwt)	43.90	50.10	50.90	48.20	54.30	48.90	40.60	40.30	43.00	46.70
Lambs (\$/cwt)	68.10	69.10	77.90	76.00	76.80	71.90	65.70	72.80	80.70	79.60
All milk, sold to plants (\$/cwt)	12.70	12.50	12.50	12.90	12.70	12.90	12.90	12.70	12.50	12.30
Milk, manuf. grade (\$/cwt)	11.78	11.55	11.40	11.60	11.60	11.80	11.70	11.60	11.30	11.10
Broilers (cts/lb)	30.1	34.5	28.5	30.1	28.5	25.2	26.4	24.6	27.1	25.7
Eggs (cts/doz) 3/	57.4	61.2	53.8	58.3	59.7	51.3	55.2	48.6	49.3	46.9
Turkeys (cts/lb)	47.2	44.4	34.2	35.3	30.8	29.9	33.7	38.1	31.8	29.0
Wool (cts/lb) 4/	63.3	66.8	NA	59.6	68.2	87.2	86.5	86.2	75.2	93.3

1/ Calendar year averages, except for potatoes, dry edible beans, apples, oranges, and grapefruit, which are crop years.

2/ Equivalent on-tree returns. 3/ Average of all eggs sold by producers including hatching eggs and eggs sold at retail.

4/ Average local market price, excluding incentive payments. P = Preliminary. NA = not available.

Information contact: National Agricultural Statistics Service (202) 447-5446.

## Producer and Consumer Prices

Table 6.—Consumer Price Index for All Urban Consumers, U.S. Average (Not Seasonally Adjusted)

	Annual		1987					1988		
	1987	Jan	June	July	Aug 1982-84=100	Sept	Oct	Nov	Dec	Jan
<b>Consumer price index, all items</b>										
Consumer price index, less food	113.6	111.2	113.5	113.8	114.4	115.0	115.3	115.4	115.4	115.7
All food	113.5	112.1	113.8	113.7	113.8	114.1	114.3	114.3	114.7	115.7
Food away from home	117.0	115.2	116.8	117.2	117.5	118.0	118.3	118.6	118.9	119.3
Food at home	111.9	110.7	112.6	112.1	112.1	112.4	112.4	112.1	112.8	114.1
Meats 1/	109.6	107.5	110.6	111.7	112.1	112.0	111.8	111.1	110.4	110.1
Beef & veal	106.3	102.9	108.3	108.4	107.8	107.4	107.8	108.6	108.5	107.7
Pork	115.9	115.1	116.6	119.7	120.7	121.1	119.0	115.5	113.1	113.4
Poultry	112.6	117.0	112.1	111.0	112.9	112.5	111.8	107.9	107.6	108.9
Fish	129.9	126.6	128.3	129.7	130.8	132.0	131.4	132.3	133.3	137.2
Eggs	91.5	100.8	84.1	87.8	85.8	97.6	91.4	93.9	85.5	90.1
Dairy products 2/	105.9	105.3	105.5	105.3	105.7	106.4	106.9	106.9	106.7	107.4
Fats & oils 3/	108.1	108.5	107.8	108.4	108.3	107.8	107.4	108.0	107.7	108.5
Fresh fruit	132.0	125.0	140.6	133.9	131.8	131.7	135.7	125.8	126.3	130.7
Processed fruit	110.6	107.9	111.3	110.8	111.8	112.1	111.5	111.6	112.3	115.1
Fresh vegetables	121.6	116.2	129.2	121.0	114.5	114.6	112.5	121.2	140.2	143.9
Potatoes	116.0	106.4	136.4	139.1	127.6	110.5	101.9	100.6	103.8	104.6
Processed vegetables	107.1	106.2	107.3	107.7	107.9	107.6	107.5	107.3	107.3	107.2
Cereals & bakery products	114.8	112.9	114.7	115.2	115.3	115.4	115.6	116.2	116.8	118.1
Sugar & sweets	111.0	110.3	111.2	111.1	111.3	111.6	111.6	111.4	111.0	112.2
Beverages, nonalcoholic	107.5	111.4	106.8	105.9	105.8	105.8	106.7	105.0	104.8	106.9
Apparel commodities less footwear	109.6	104.1	107.9	105.7	108.3	112.9	115.2	115.0	111.7	108.9
Footwear	105.1	101.3	105.6	103.4	104.2	105.7	107.3	108.0	107.2	106.1
Tobacco & smoking products	133.6	129.6	132.4	135.0	135.3	135.9	136.3	136.5	137.0	140.8
Beverages, alcoholic	114.1	112.4	114.0	114.4	114.7	114.9	115.2	115.4	115.4	115.8

1/ Beef, veal, lamb, pork, and processed meat. 2/ Includes butter. 3/ Excludes butter.

Information contact: Ralph Parlett (202) 786-1870.

Table 7.—Producer Price Indexes, U.S. Average (Not Seasonally Adjusted)

	Annual				1987						1988
	1985	1986	1987	P	Jan	Aug	Sept	Oct	Nov	Dec	Jan
	1982=100										
Finished goods 1/	104.7	103.2	105.4	104.0	105.9	105.7	106.3	106.2	105.7	105.7	106.2
Consumer foods	104.6	107.2	109.5	108.0	109.5	110.5	109.6	109.9	108.8	110.6	
Fresh fruit	108.1	112.9	111.4	108.3	107.2	107.5	112.9	120.8	118.6	106.6	
Fresh & dried vegetables	99.4	97.8	103.8	91.6	94.3	99.4	91.7	125.8	109.6	126.2	
Dried fruit	88.7	91.9	95.0	93.6	95.2	94.2	94.6	97.9	99.0	99.1	
Canned fruit & juice	113.8	111.0	115.4	113.6	116.4	116.4	116.2	116.4	117.2	119.1	
Frozen fruit & juice	118.5	103.0	113.4	109.9	113.1	112.9	112.7	115.9	126.6	126.0	
Fresh veg. excl. potatoes	100.3	99.3	99.0	95.2	77.1	98.2	89.6	135.4	112.0	135.9	
Canned veg. & juices	101.9	101.2	103.5	102.1	105.0	102.8	102.3	102.5	102.6	103.1	
Frozen vegetables	106.5	106.6	107.3	107.2	107.5	107.7	107.2	106.5	106.7	106.8	
Potatoes	101.2	104.0	120.5	119.7	122.2	110.6	106.8	108.5	114.2	107.5	
Eggs	95.6	99.5	87.6	99.0	79.7	100.6	81.1	92.6	70.6	76.5	
Bakery products	113.9	116.6	118.5	116.9	119.2	119.3	120.2	120.1	121.3	122.5	
Meats	90.9	93.9	100.3	95.2	103.0	105.7	101.2	95.5	93.2	98.0	
Beef & veal	90.3	88.1	95.4	88.5	95.5	96.7	94.8	92.0	92.5	96.1	
Pork	88.1	89.9	104.7	99.7	112.4	119.2	108.2	95.1	87.1	97.3	
Processed poultry	110.4	116.7	103.5	110.3	104.2	101.9	97.4	98.8	96.3	98.2	
Fish	114.6	124.9	141.9	139.5	132.3	133.5	156.3	153.3	156.3	159.2	
Dairy products	100.2	99.9	101.7	101.9	101.9	102.7	102.2	102.0	101.8	101.1	
Processed fruits & vegetables	107.9	104.9	108.6	107.3	109.3	108.5	108.1	108.7	110.4	111.0	
Shortening & cooking oils	123.9	103.3	104.0	102.2	103.1	104.3	105.5	106.8	109.1	116.2	
Consumer finished goods less foods	103.3	98.4	100.6	98.8	101.8	101.4	102.0	101.8	101.4	101.3	
Beverages, alcoholic	107.6	110.1	110.4	109.7	110.1	109.5	110.2	110.0	110.3	110.4	
Soft drinks	107.7	109.5	111.9	110.3	112.0	112.0	112.7	112.7	112.6	112.9	
Apparel	105.0	106.3	108.4	107.0	108.9	109.2	109.5	109.4	109.5	110.1	
Footwear	104.7	106.8	109.4	108.0	110.3	111.0	111.0	110.2	111.7	112.7	
Tobacco products	132.5	142.4	154.7	150.8	157.6	157.6	157.6	157.6	163.3	166.3	
Intermediate materials 2/	102.6	99.1	101.5	98.9	102.5	102.7	103.1	103.5	103.7	104.2	
Materials for food manufacturing	101.4	98.4	100.7	98.5	101.5	102.8	101.7	100.3	99.8	102.0	
Flour	99.8	94.5	92.9	90.1	91.1	93.2	94.6	93.4	93.3	94.3	
Refined sugar 3/	102.8	103.2	106.5	104.7	107.1	107.4	107.3	106.9	106.8	106.5	
Crude vegetable oils	137.5	84.8	84.0	79.8	79.5	79.9	86.4	89.0	92.9	105.0	
Crude materials 4/	95.8	87.7	93.6	89.0	96.5	95.7	95.2	94.6	94.3	93.4	
Foodstuffs & feedstuffs	94.8	93.2	96.2	91.8	97.1	96.6	95.9	95.2	95.8	96.9	
Fruits & vegetables 5/	102.6	103.9	106.6	98.4	99.5	102.5	100.5	123.0	113.0	117.0	
Grains	96.1	79.2	71.1	66.8	63.4	69.5	72.8	74.9	78.9	77.5	
Livestock	89.1	91.8	101.9	93.1	106.5	104.1	101.9	96.3	97.5	98.7	
Poultry, live	117.8	129.6	101.2	110.6	111.2	100.3	88.5	93.9	87.7	96.6	
Fibers, plant & animal	97.4	88.3	106.5	94.7	123.4	118.5	108.9	105.1	100.5	100.7	
Fluid milk	93.6	90.9	91.9	96.1	91.1	92.7	93.2	93.1	91.5	90.5	
Oilseeds	94.4	91.4	99.3	94.2	99.3	96.7	97.2	100.7	106.5	110.0	
Tobacco, leaf	101.2	89.7	85.8	84.6	82.7	88.5	89.2	88.5	88.5	87.2	
Sugar, raw cane	104.6	104.9	110.3	107.7	111.2	110.9	110.6	110.1	109.8	109.7	
All commodities	103.1	100.1	102.8	100.5	103.8	103.7	104.1	104.2	104.1	104.5	
Industrial commodities	103.7	99.9	102.6	100.4	103.7	103.5	104.0	104.2	104.1	104.3	
All foods 6/	103.9	105.5	107.8	106.1	107.7	108.9	108.1	108.5	107.4	109.3	
Farm products &	100.6	101.2	103.7	101.1	104.0	104.6	104.0	104.0	103.9	105.3	
Processed foods & feeds	95.1	92.9	95.4	91.1	95.7	96.1	94.5	96.0	95.4	96.8	
Farm products	103.5	105.4	107.9	106.1	108.2	108.9	108.7	108.1	108.2	109.5	
Processed foods & feeds 6/	110.2	111.0	112.6	110.2	112.6	113.0	114.5	115.2	116.6	118.5	
Cereal & bakery products	107.9	109.6	112.7	110.8	113.9	114.0	113.5	113.3	113.0	112.8	
Sugar & confectionery	107.7	114.5	112.5	112.6	112.3	111.6	112.2	112.3	112.2	112.4	
Beverages	107.7	114.5	112.5	112.6	112.3	111.6	112.2	112.3	112.2	112.4	

1/ Commodities ready for sale to ultimate consumer. 2/ Commodities requiring further processing to become finished goods. 3/ All types and sizes of refined sugar. 4/ Products entering market for the first time which have not been manufactured at that point. 5/ Fresh and dried. 6/ Includes all raw, intermediate, and processed foods (excludes soft drinks, alcoholic beverages, and manufactured animal feeds). P = preliminary. R = revised.

Information contact: Bureau of Labor Statistics (202) 523-1913.

## Farm-Retail Price Spreads

Table 8.—Farm-Retail Price Spreads

	Annual				1987						1988	
	1984	1985	1986	1987	Jan	Aug	Sept	Oct	Nov	Dec	Jan	
<b>Market basket 1/</b>												
Retail cost (1967=100)	279.3	282.6	288.7	303.1	288.3	305.0	305.0	305.7	305.1	306.5	309.2	
Farm value (1967=100)	255.4	237.2	234.1	240.4	234.8	243.4	243.2	235.6	237.2	231.8	233.2	
Farm-retail spread (1967=100)	293.3	309.3	320.8	340.0	335.6	341.3	342.6	346.9	345.1	350.4	353.9	
Farm value/retail cost (%)	33.9	31.1	30.0	29.4	29.2	29.5	29.4	28.5	28.8	28.0	27.9	
<b>Meat Products</b>												
Retail cost (1967=100)	268.1	265.8	273.9	294.2	288.3	301.0	300.7	300.2	298.4	296.4	295.5	
Farm value (1967=100)	241.5	221.8	229.1	245.9	223.8	257.6	255.4	248.2	231.3	227.0	227.5	
Farm-retail spread (1967=100)	289.1	316.6	326.2	350.7	363.9	351.8	353.7	361.1	377.0	377.7	375.2	
Farm value/retail cost (%)	48.6	45.1	45.1	45.1	41.9	46.2	45.8	44.6	41.8	41.3	41.5	
<b>Dairy Products</b>												
Retail cost (1967=100)	253.2	258.0	258.4	264.6	263.2	264.2	266.0	267.2	267.2	266.8	268.7	
Farm value (1967=100)	258.8	248.2	241.5	244.2	252.0	244.1	244.9	247.3	244.9	241.8	242.6	
Farm-retail spread (1967=100)	248.3	266.5	273.3	282.5	273.0	281.9	284.5	284.7	286.8	288.7	291.6	
Farm value/retail cost (%)	47.8	45.0	43.7	42.2	44.8	43.2	43.1	43.3	42.9	42.4	42.2	
<b>Poultry</b>												
Retail cost (1967=100)	218.5	216.4	232.7	229.3	238.3	230.0	228.1	227.8	219.8	219.7	221.9	
Farm value (1967=100)	249.9	234.9	255.4	206.5	221.7	219.8	201.7	182.0	194.1	190.6	196.3	
Farm-retail spread (1967=100)	188.1	198.4	210.9	251.4	254.4	239.9	255.7	272.1	244.6	217.9	246.7	
Farm value/retail cost (%)	56.3	53.4	54.0	44.3	48.8	47.0	43.3	39.3	43.4	42.7	43.5	
<b>Eggs</b>												
Retail cost (1967=100)	209.0	174.3	186.3	175.5	193.5	164.4	187.0	175.1	179.8	163.8	172.6	
Farm value (1967=100)	230.3	178.9	197.7	160.2	184.4	146.5	183.7	148.2	168.0	139.2	142.3	
Farm-retail spread (1967=100)	178.2	167.6	177.1	197.7	206.5	180.3	191.8	213.9	197.0	189.4	216.3	
Farm value/retail cost (%)	65.1	60.7	61.1	53.9	56.3	52.6	58.1	50.0	55.2	50.2	48.7	
<b>Cereal &amp; Bakery Products</b>												
Retail cost (1967=100)	305.3	317.0	325.8	336.9	331.2	338.8	338.9	339.5	341.2	343.2	347.0	
Farm value (1967=100)	192.0	175.9	142.3	131.3	128.4	124.0	130.8	134.6	142.0	138.9	143.7	
Farm-retail spread (1967=100)	328.7	346.2	363.7	379.5	373.2	383.3	382.0	381.9	382.4	385.5	388.1	
Farm value/retail cost (%)	10.8	9.5	7.5	6.7	6.6	6.3	6.6	7.1	6.9	7.1		
<b>Fresh Fruits</b>												
Retail cost (1967=100)	345.3	383.5	380.1	444.0	412.2	452.0	451.2	466.9	430.5	416.4	429.2	
Farm value (1967=100)	315.1	302.7	285.3	290.3	283.0	242.4	273.0	293.4	326.6	304.3	324.9	
Farm-retail spread (1967=100)	358.9	419.8	437.1	513.0	470.2	546.1	531.2	544.8	477.2	465.7	503.0	
Farm value/retail cost (%)	28.3	24.4	22.7	20.3	21.3	16.6	18.8	19.5	23.5	22.6	19.1	
<b>Fresh Vegetables</b>												
Retail costs (1967=100)	331.8	317.5	330.3	372.0	355.4	351.3	351.5	345.0	371.8	430.0	441.2	
Farm value (1967=100)	298.7	286.7	248.1	309.4	310.9	317.6	311.3	237.5	401.2	361.8	358.4	
Farm-retail spread (1967=100)	347.4	346.1	369.0	401.3	376.3	367.1	379.8	395.6	358.0	462.3	479.6	
Farm value/retail cost (%)	28.8	25.9	24.0	26.6	28.0	28.9	26.5	22.0	34.5	28.9	26.0	
<b>Processed fruits &amp; vegetables</b>												
Retail cost (1967=100)	306.1	314.1	309.1	319.6	314.4	323.0	323.2	322.0	321.8	323.1	327.9	
Farm value (1967=100)	343.5	378.5	326.3	354.4	357.0	340.0	343.4	335.3	338.1	375.4	381.8	
Farm-retail spread (1967=100)	297.8	299.9	305.3	311.9	305.0	319.2	318.8	319.0	318.2	311.5	316.0	
Farm value/retail costs (%)	20.3	21.8	19.1	20.1	20.6	18.1	18.2	18.9	19.0	21.1	21.1	
<b>Fats &amp; Oils</b>												
Retail cost (1967=100)	288.0	294.4	287.8	291.9	283.4	292.6	291.2	290.1	291.8	291.0	293.0	
Farm value (1967=100)	324.8	271.3	199.1	192.8	196.9	189.7	185.3	194.5	195.9	204.1	243.6	
Farm-retail spread (1967=100)	273.8	303.3	321.9	330.0	328.8	332.2	331.2	326.9	328.7	324.4	312.0	
Farm value/retail cost (%)	31.3	25.6	19.4	18.4	18.8	17.8	18.6	18.6	19.5	23.1		
	Annual				1987						1988	
	1984	1985	1986	1987	Jan	Aug	Sept	Oct	Nov	Dec	Jan	

1/ Retail costs are based on indexes of retail prices for domestically produced farm foods from the CPI-U published monthly by the Bureau of Labor Statistics. The farm value is the payment to farmers for quantity of farm product equivalent to retail unit, less allowance for byproduct. Farm values are based on prices at first point of sale and may include marketing charges such as grading and packing for some commodities. The farm-retail spread, the difference between the retail price and the farm value, represents charges for assembling, processing, transporting, and distributing these foods. 2/ Estimated weighted average price of retail cuts from pork and choice grade 1 beef carcasses. Retail cut prices from BLS. 3/ Value of carcass quantity (beef) and wholesale cuts (pork) equivalent to 1 lb. of retail cuts; beef adjusted for value of fat and bone byproducts. 4/ Market value to producer for quantity of live animal equivalent to 1 lb. of retail cuts minus value of byproducts. 5/ Represents charges for retailing and other marketing services such as fabricating, wholesaling, and intercity transportation. 6/ Represents charges made for livestock marketing, processing, and transportation to city where consumed.

Note: Annual historical data on farm-retail price spreads may be found in *Food Consumption, Prices and Expenditures, Statistical Bulletin* 749, ERS, USDA.

Information contacts: Denis Dunham (202) 786-1870; Ron Gustafson (202) 786-1286.

Table 9.—Price Indexes of Food Marketing Costs

(See the March 1988 issue.)

Information contact: Denis Dunham (202) 786-1870

## Livestock and Products

Table 10.—U.S. Meat Supply &amp; Use

Item	Beg. stocks	Pro- duc- tion 1/	Im- ports	Total supply	Ex- ports	Ship- ments	Ending stocks	Civilian consumption		Primary market price 3/
								Total	Per capita 2/	
Million pounds 4/										
Beef:										
1985	472	23,728	2,071	26,271	328	51	420	25,473	78.8	58.37
1986	420	24,371	2,128	26,919	521	52	412	25,935	78.4	57.75
1987	412	23,365	2,269	26,246	604	56	384	25,201	75.5	64.60
1988 F	384	22,533	2,300	25,217	530	60	435	24,192	71.8	63-69
Pork:										
1985	348	14,807	1,128	16,283	128	131	289	15,734	61.9	44.77
1986	289	14,063	1,122	15,475	86	132	248	15,009	58.4	51.19
1987	248	14,379	1,195	15,822	109	127	342	15,245	58.8	51.69
1988 F	342	15,340	1,300	16,982	120	140	330	16,392	62.6	41-47
Veal:										
1985	14	515	20	549	4	1	11	533	1.8	62.42
1986	11	524	27	562	5	1	7	549	1.9	60.89
1987	7	435	24	466	7	1	4	454	1.5	78.05
1988 F	4	415	25	444	5	1	7	431	1.5	80-86
Lamb and mutton:										
1985	7	358	36	401	1	2	13	385	1.4	68.61
1986	13	338	41	392	1	2	13	376	1.4	70.26
1987	13	315	44	372	1	2	8	361	1.3	78.09
1988 F	8	325	50	383	2	1	9	371	1.3	74-80
Total red meat:										
1985	841	39,408	3,255	43,504	461	185	733	42,126	144.0	NA
1986	735	39,296	3,319	43,348	613	187	679	41,869	140.1	NA
1987	679	38,694	3,532	42,205	721	186	738	41,261	137.2	NA
1988 F	738	38,613	3,675	43,026	657	202	781	41,386	137.2	NA
Broilers:										
1985	20	13,762	0	13,781	417	143	27	13,195	55.2	50.8
1986	27	14,316	0	14,342	566	149	24	13,603	56.3	56.9
1987	24	15,555	0	15,579	752	146	25	14,656	60.1	47.4
1988 F	25	16,332	0	16,357	800	140	25	15,392	62.6	41-47
Mature chicken:										
1985	119	636	0	755	21	1	144	589	2.5	NA
1986	144	629	0	773	16	3	163	591	2.4	NA
1987	163	655	0	818	15	2	188	612	2.5	NA
1988 F	188	664	0	852	30	4	160	658	2.7	NA
Turkeys:										
1985	125	2,942	0	3,067	27	7	150	2,884	12.0	75.5
1986	150	3,271	0	3,422	27	4	178	3,212	13.3	72.2
1987	178	3,855	0	4,034	33	5	282	3,713	15.2	57.8
1988 F	282	4,281	0	4,563	33	4	250	4,276	17.4	50-56
Total poultry:										
1985	264	17,340	0	17,604	465	151	321	16,668	69.7	NA
1986	321	18,216	0	18,537	609	156	365	17,407	72.1	NA
1987	365	20,066	0	20,431	800	153	496	18,982	77.9	NA
1988 F	496	21,277	0	21,773	863	148	435	20,327	82.6	NA
Red meat & poultry:										
1985	1,105	56,748	3,255	61,108	926	336	1,054	58,792	213.6	NA
1986	1,054	57,512	3,319	61,885	1,222	343	1,044	59,276	212.1	NA
1987	1,044	58,760	3,532	63,396	1,521	339	1,233	60,242	215.0	NA
1988 F	1,233	59,890	3,675	64,799	1,520	350	1,216	61,713	219.8	NA

1/ Total including farm production for red meats and federally inspected plus non-federally inspected for Poultry. 2/ Retail weight basis. (The beef carcass-to-retail conversion factor was changed from .74 to .73 beginning in 1986.) 3/ Dollars per cwt for red meat; cents per pound for poultry. Beef: Choice steers, Omaha 1,000-lb. 100 lb.; pork: barrows and gilts, 7 markets; veal: farm price of calves; lamb and mutton: Choice slaughter lambs, San Angelo; broilers: wholesale 12-city average; turkeys: wholesale NY 8-16 lb. young hens. 4/ Carcass weight for red meats and certified ready-to-cook for poultry. F = forecast. NA = not available.

Information contacts: Ron Gustafson, Leland Southard, or Mark Neimar (202) 786-1285.

Table 11.—U.S. Egg Supply &amp; Use

	Beg. stocks	Pro- duc- tion	Im- ports	Total supply	Ex- ports	Ship- ments	Hatch- ing use	Ending stocks	Consumption		
									Total	Per capita	Wholesale price*
Million dozen											
1983	20.3	5,659.2	23.4	5,702.9	85.8	26.6	500.0	9.3	5,081.2	259.8	75.2
1984	9.3	5,708.3	32.0	5,749.5	58.2	27.8	529.7	11.1	5,122.8	259.4	80.9
1985	11.1	5,688.0	12.7	5,711.8	70.6	30.3	548.1	10.7	5,052.0	253.4	66.4
1986	10.7	5,705.0	13.7	5,729.3	101.6	28.0	566.8	10.4	5,022.5	249.5	71.1
1987	10.4	5,795.7	5.6	5,811.7	111.2	23.2	595.4	15.0	5,066.9	249.5	61.6
1988 F	15.0	5,765.0	4.0	5,784.0	115.0	24.0	625.0	10.0	5,010.0	244.4	57-63

\* Cartoned Grade A large eggs, New York. F = forecast.

Information contact: Robert Bishop (202) 786-1714.

Table 12.—U.S. Milk Supply & Use<sup>1</sup>

Calendar year	Commercial				Total commer- cial Supply	CCC net re- movals	Commercial			All milk price 2/
	Pro- duc- tion	Farm use	Beg. market- ings	Im- ports			Disap- pear- ance			
							Ending stocks			
Billion Pounds										
1981	132.8	2.3	130.5	5.8	2.3	138.5	12.9	5.4	120.3	13.77
1982	135.5	2.4	133.1	5.4	2.5	141.0	14.3	4.6	122.1	13.61
1983	139.7	2.4	137.3	4.6	2.6	144.5	16.6	5.2	122.5	13.58
1984	135.4	2.9	132.5	5.2	2.7	140.5	8.6	4.9	126.9	13.46
1985	143.1	2.5	140.7	4.9	2.8	148.4	13.2	4.6	130.6	12.75
1986	143.4	2.6	140.8	4.6	2.7	148.1	10.6	4.2	133.4	12.51
1987 P	142.5	2.6	139.9	4.2	2.5	146.6	6.7	4.6	135.3	12.53
1988 F	146.0	2.4	143.6	4.6	2.6	150.8	7.4	4.7	138.7	11.80

1/ Milkfat basis. Totals may not add because of rounding. 2/ Delivered to plants and dealers; does not reflect deductions. P = Preliminary. F = Forecast.

Information contact: Jim Miller (202) 786-1770.

Table 13.—Poultry &amp; Eggs

	Annual				1987					1988	
	1985	1986	1987 2	Jan	Aug	Sept	Oct	Nov	Dec	Jan	
<b>Broilers</b>											
Federally inspected slaughter, certified (mil lb)	13,569.2	14,265.6	15,498.1	1,275.7	1,257.0	1,370.7	1,381.4	1,177.1	1,336.8	1,296.6	
Wholesale price, 12-city, (cts/lb)	50.8	56.9	47.4	51.8	52.6	46.4	43.2	40.7	39.8	43.9	
Price of grower feed (\$/ton)	197	187	224	173	192	190	194	196	197		
Broiler-feed price ratio 1/	3.1	3.7	3.7	3.6	3.3	3.0	2.6	2.7	2.5	2.8	
Stocks beginning of period (mil lb)	19.7	26.6	30.7	23.9	24.8	24.7	28.3	27.3	24.1	24.8	
Broiler-type chicks hatched (mil) 2/	4,803.8	5,013.3	535.1	439.6	449.9	430.7	438.6	420.2	465.5	464.5	
<b>Turkeys</b>											
Federally inspected slaughter, certified (mil lb)	2,800	3,133	3,715	215.4	356.9	383.3	411.0	373.5	297.0	255.4	
Wholesale price, Eastern U.S., 8-16 lb. young hens (cts/lb)	75.5	72.2	57.8	55.3	56.1	56.1	54.7	60.7	66.5	52.8	
Price of turkey grower feed (\$/ton)	212	215	256	212	217	220	214	217	218	226	
Turkey-feed price ratio 1/	4.5	4.1	3.9	3.3	2.9	2.8	2.8	3.1	3.5	2.8	
Stocks beginning of period (mil lb)	125.3	150.2	437.2	178.2	472.5	559.6	640.5	629.8	321.4	282.4	
Poults placed in U.S. (mil)	197.8	225.4	26.5	21.1	20.0	15.7	16.7	17.7	19.9	22.3	
<b>Eggs</b>											
Farm production (mil)	68,256	68,459	6,955	5,915	5,786	5,686	5,931	5,803	6,007	5,960	
Average number of layers (mil) 3/	277	278	280	236	231	233	236	237	238	237	
Rate of lay (eggs per layer on farms) 3/	247	248	248	20.9	20.8	20.2	21.0	20.4	21.2	21.1	
Cartoned price, New York, Grade A large (cts/doz) 4/	66.4	71.1	61.6	67.1	63.2	68.3	60.2	60.5	56.9	55.9	
Price of laying feed (\$/ton)	182	174	203	165	178	178	168	167	168	176	
Egg-feed price ratio 1/	6.3	7.0	7.6	7.2	5.7	6.7	6.1	6.6	5.8	5.6	
<b>Stocks, first of month</b>											
Small (mil doz)	.93	.72	1.16	.66	1.02	.96	.99	1.53	1.20	1.29	
Frozen (mil doz)	10.2	10.0	14.5	.98	13.1	13.3	12.5	13.6	13.1	13.1	
Replacement chicks hatched (mil)	407	425	43.1	34.2	35.3	32.5	34.2	31.0	31.6	29.5	

1/ Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight. 2/ Placement of broiler chicks is currently reported for 12 States only; henceforth, hatch of broiler-type chicks will be used as a substitute. 3/ Monthly data only available for 20 States. 4/ Price of cartoned eggs to volume buyers for delivery to retailers. P = preliminary.

Information contact: Mark Weimer (202) 786-1714.

Table 14.—Dairy

	Annual			1987						1988
	1985	1986	1987	Jan	Aug	Sept	Oct	Nov	Dec	Jan
Milk prices, Minnesota-Wisconsin:										
3.5% fat (\$/cwt) 1/	11.48	11.30	11.23	11.70	11.27	11.42	11.35	11.34	11.12	10.91
Wholesale prices										
Butter, Grade A Ch., (cts/lb)	141.1	144.5	140.2	137.3	148.1	145.3	136.8	135.6	134.0	131.9
Am. Cheese, Wis.										
Assembly pt. (cts/lb)	127.7	127.3	123.2	127.7	125.5	126.6	121.9	121.3	120.7	118.4
Nonfat dry milk, (cts/lb) 2/	84.0	80.6	79.3	82.0	79.6	80.4	80.0	77.6	77.0	79.8
USDA net removals										
Total milk equiv. (mil lb) 3/	13,174.1	10,628.1	6,706.0	1,201.3	148.9	348.9	660.4	429.3	746.4	1,628.4
Butter (mil lb)	334.2	287.6	187.3	45.1	1.0	10.0	22.2	10.9	18.7	56.4
Am. Cheese (mil lb)	629.0	468.4	282.0	26.7	12.2	14.0	19.8	20.4	36.1	46.6
Nonfat dry milk (mil lb)	940.6	827.3	559.4	49.9	39.6	33.7	30.4	24.2	42.4	48.1
Milk										
Milk prod. 21 States (mil lb)	121,043	121,433	121,094	9,889	10,138	9,718	9,931	9,572	10,038	10,205
Milk per cow (lb)	13,160	13,399	13,932	1,123	1,173	1,124	1,148	1,107	1,158	1,177
Number of milk cows (thou)	9,198	9,063	8,692	8,805	8,645	8,645	8,653	8,647	8,667	8,667
U.S. milk production (mil lb)	143,147	143,381	142,462	6/11,668	6/11,888	6/11,417	6/11,665	6/11,264	6/11,808	6/12,045
Stocks, beginning										
Total (mil lb)	16,704	13,695	12,867	12,867	11,770	10,580	9,981	8,762	8,082	7,377
Commercial (mil lb)	4,937	4,590	4,165	4,165	5,696	5,328	5,380	4,993	4,630	4,583
Government (mil lb)	11,767	9,105	8,702	8,702	6,074	5,252	4,602	3,779	3,452	2,794
Imports, total (mil lb) 3/	2,777	2,733	2,490	200	227	210	261	279	249	NA
Commercial disappearance										
Milk equiv. (mil lb)	130,640	133,350	135,268	10,135	12,117	11,014	11,446	11,256	11,141	NA
Butter										
Production (mil lb)	1,247.8	1,202.4	1,113.4	109.2	67.6	78.1	90.2	88.2	109.4	124.7
Stocks, beginning (mil lb)	296.5	205.5	193.0	193.0	211.2	187.3	176.2	165.6	158.5	143.2
Commercial disappearance (mil lb)	918.2	922.9	911.8	59.0	78.3	63.5	71.8	85.3	82.2	NA
American cheese										
Production (mil lb)	2,855.2	2,798.2	2,740.9	219.5	208.5	206.5	217.6	210.2	231.7	225.8
Stocks, beginning (mil lb)	960.5	850.2	697.1	697.1	577.8	533.3	505.0	446.5	401.8	364.1
Commercial disappearance (mil lb)	2,279.1	2,382.8	2,467.7	177.9	214.8	193.4	229.8	201.6	219.2	NA
Other cheese										
Production (mil lb)	2,225.7	2,411.0	2,576.8	194.0	215.0	220.5	228.1	218.9	225.3	207.0
Stocks, beginning (mil lb)	101.4	94.1	92.0	92.0	95.2	96.7	95.4	97.0	92.8	89.7
Commercial disappearance (mil lb)	2,515.7	2,684.9	2,829.3	206.1	235.2	244.7	253.6	254.8	250.8	NA
Nonfat dry milk										
Production (mil lb)	1,390.0	1,284.1	1,039.2	82.1	80.0	65.7	65.6	65.0	89.3	83.8
Stocks, beginning (mil lb)	1,247.6	1,011.1	686.8	686.8	334.7	301.8	245.9	200.4	188.0	177.2
Commercial disappearance (mil lb)	435.0	479.1	475.3	34.8	46.5	42.5	45.3	40.8	27.4	NA
Frozen dessert										
Production (mil gal) 4/	1,251.0	1,248.6	1,273.1	79.9	123.3	108.5	95.2	81.7	84.6	76.0
	Annual			1986			1987			
	1985	1986	1987	II	III	IV	I	II	III	

1/ Manufacturing grade milk. 2/ Prices paid f.o.b. Central States Production area, high heat spray process.

3/ Milk-equivalent, fat-basis. 4/ Ice cream, ice milk, and hard sherbet. 5/ Based on average milk price after adjustment for price-support deductions. 6/ Estimated. NA = not available.

Information contact: Jim Miller (202) 786-1770.

Table 15.—Wool

	Annual			1987						1988
	1985	1986	1987	II	III	IV	I	II	III	IV
U.S. wool Price,										
Boston 1/ (cts/lb)	192	191	265	193	300	295	300	300	300	315
Imported wool Price,										
Boston 2/ (cts/lb)	197	201	247	211	261	244	259	274	278	295
U.S. mill consumption, scoured										
Apparel wool (thou lb)	106,051	126,768	137,498	10,426	10,030	12,438	10,691	10,287	11,844	11,005
Carpet wool (thou lb)	10,562	9,960	13,091	709	1,412	1,174	1,414	1,063	708	1,323
1/ Wool price delivered at U.S. mills, clean basis. Graded Territory 64's (20.60-22.04 microns) staple 2-3/4" and up.										
2/ Wool price delivered at U.S. mills, clean basis. Australian 60/62's, type 64A (24 micron). Duty since 1982 has been 10.0 cents.										

Information contact: John Lawler (202) 786-1840.

Table 16.—Meat Animals

	Annual			1987						1988	
	1985	1986	1987	Jan	Aug	Sept	Oct	Nov	Dec	Jan	
<b>Cattle on feed (7 States)</b>											
Number on feed (thou head) 1/	8,635	7,920	7,643	7,643	6,689	6,818	7,535	8,364	8,412	8,066	
Placed on feed (thou head)	19,346	20,035	21,020	1,591	1,897	2,424	2,604	1,609	1,350	1,660	
Marketings (thou head)	18,989	19,263	19,390	1,803	1,700	1,636	1,690	1,458	1,577	1,759	
Other disappearance (thou head)	1,132	1,049	1,207	127	68	71	85	103	119	111	
Beef steer-corn price ratio, Omaha 2/	23.3	31.0	41.0	40.5	44.0	42.8	41.2	38.4	36.7	36.4	
Hog-corn price ratio, Omaha 2/	17.8	27.8	33.7	32.7	41.3	36.3	31.0	24.3	23.8	25.0	
<b>Market prices (\$/cwt)</b>											
Slaughter cattle											
Choice steers, Omaha	58.37	57.75	64.60	58.79	64.50	64.81	64.81	64.20	63.93	65.00	
Utility cows, Omaha	38.32	37.19	44.83	39.79	46.35	47.62	46.41	44.46	46.69	47.83	
Choice vealers, S. St. Paul	58.28	59.92	78.74	65.94	79.22	80.25	82.50	82.50	83.00	86.88	
Feeder cattle											
Choice, Kansas City, 600-700 lb.	64.56	62.79	75.36	63.19	79.38	81.50	77.00	79.50	78.90	85.00	
Slaughter hogs											
Barrows & gilts, 7-markets	44.77	51.19	51.69	47.39	60.35	54.72	48.75	40.65	41.14	43.43	
Feeder pigs											
5 Mo. 40-50 lb. (per head)	37.20	45.62	46.69	47.00	48.05	47.28	41.53	36.56	31.74	37.74	
Slaughter sheep & lambs											
Lambs, Choice, San Angelo	68.61	69.46	78.09	78.56	71.83	70.05	66.25	65.00	73.83	83.53	
Ewes, Good, San Angelo	34.02	34.78	38.62	39.81	38.67	39.81	37.12	37.83	39.88	43.19	
Feeder lambs											
Choice, San Angelo	85.91	73.14	102.26	95.08	98.00	102.55	102.00	99.50	105.83	113.63	
Wholesale meat prices, Midwest											
Choice steer beef, 600-700 lb.	90.76	88.98	97.21	89.70	95.45	96.87	96.77	95.34	94.50	97.15	
Canner & cutter cow beef	74.13	71.31	83.70	77.92	85.63	86.82	83.80	83.41	88.45	88.98	
Pork loins, 8-14 lb 3/	91.51	104.78	106.23	98.29	123.50	122.66	103.49	80.35	84.70	102.43	
Pork bellies, 12-14 lb.	59.50	65.82	63.11	66.32	80.46	59.74	49.39	45.86	42.60	51.82	
Hams, skinned, 14-17 lb.	67.50	80.01	80.96	65.75	86.15	93.58	97.81	96.36	91.98	66.70	
All fresh beef retail price 4/	NA	NA	212.92	208.10	213.99	214.48	213.64	215.94	214.69	214.30	
Commercial slaughter (thou head)*											
Cattle	36,293	37,288	35,647	3,199	3,054	3,070	3,131	2,752	2,900	2,921	
Steers	16,912	17,516	17,443	1,531	1,492	1,424	1,512	1,314	1,425	1,464	
Heifers	11,237	11,097	10,906	1,006	958	1,055	962	817	868	891	
Cows	7,391	7,960	6,608	608	547	527	593	570	555	519	
Bulls & stags	758	715	690	55	58	64	64	51	51	47	
Calves	3,385	3,408	2,836	263	214	243	249	223	253	214	
Sheep & lambs	6,165	5,635	5,193	428	416	474	460	411	451	390	
Hogs	84,492	79,598	81,090	6,917	6,176	7,030	7,723	7,321	7,815	6,977	
Commercial production (mil lb)											
Beef	23,557	24,213	23,406	2,102	2,005	2,041	2,098	1,829	1,925	1,943	
Veal	499	509	422	39	30	36	37	32	36	32	
Lamb & mutton	352	331	309	25	24	28	28	25	27	24	
Pork	14,728	13,988	14,314	1,244	1,074	1,228	1,363	1,312	1,390	1,244	
Annual											
1985	1986	1987	III	IV	1	II	III	IV	I		
<b>Cattle on feed (13 States)</b>											
Number on feed (thou head) 1/	10,653	9,754	9,245	7,870	8,197	9,245	8,807	8,666	8,992	9,769	
Placed on feed (thou head)	23,366	23,583	24,874	6,336	6,756	5,680	5,906	6,590	6,698	NA	
Marketings (thou head)	22,887	22,856	22,971	5,876	5,396	5,747	5,619	6,022	5,583	6/5,875	
Other disappearance (thou head)	1,378	1,236	1,379	233	312	371	428	242	338	NA	
<b>Hogs &amp; pigs (10 States) 5/</b>											
Inventory (thou head) 1/	42,420	41,100	39,690	38,075	39,585	39,690	38,370	40,880	43,075	42,275	
Breeding (thou head) 1/	5,348	5,258	5,110	4,870	4,895	5,110	5,215	5,325	5,300	5,400	
Market (thou head) 1/	37,072	35,842	34,580	33,155	34,690	34,580	33,155	35,555	37,775	36,875	
Farrowings (thou head)	8,831	8,223	8,783	2,074	2,115	1,967	2,352	2,257	2,258	6/2,113	
Pig crop (thou head)	67,648	63,835	68,417	16,164	16,460	14,840	18,601	17,481	17,495	NA	

1/ Beginning of period. 2/ Bushels of corn equal in value to 100 pounds live weight. 3/ Beginning January 1984 prices are for 14-17 lb.; January 1986 prices are for 14-18 lb. 4/ New series estimating the composite price of all beef grades and ground beef sold by retail stores. This new series is in addition to but does not replace the series for the retail price of choice beef that appears in table 8. 5/ Quarters are Dec. of preceding year-Feb. (I), Mar.-May (II), June-Aug. (III), and Sept.-Nov. (IV). 6/ Intentions. \*Classes estimated. NA = not available.

Information contacts: Ron Gustafson or Leland Southard (202) 786-1285.

# Crops and Products

Table 17.—Supply & Utilization<sup>1,2</sup>

	Area				Production	Total supply <sup>4/</sup>	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm Price <sup>5/</sup>
	Set aside <sup>3/</sup>	Planted	Harvested	Yield								
	Mil. acres				Bu/acre				Mil. bu			
<b>Wheat</b>												
1982/83	5.8	86.2	77.9	35.5	2,765	3,932	195	713	1,509	2,417	1,515	3.45
1983/84	30.0	76.4	61.4	39.4	2,420	3,939	369	742	1,429	2,540	1,399	3.51
1984/85	18.3	79.2	66.9	36.4	2,595	4,003	405	749	1,428	2,578	1,425	3.39
1985/86*	16.8	75.6	64.7	37.5	2,425	3,866	270	776	915	1,961	1,905	3.08
1986/87*	20.4	72.1	60.7	34.4	2,092	4,018	385	808	1,004	2,197	1,821	2.42
1987/88*	20.4	65.8	55.9	37.6	2,105	3,941	279	835	1,590	2,660	1,281	2.55-2.65
	Mil. acres				Lb/acre				Mil. cwt (rough equiv.)			
<b>Rice</b>												
1982/83	0.42	3.30	3.26	4.710	153.6	203.4	--	6/62.9	68.9	131.8	71.5	7.91
1983/84	1.74	2.19	2.17	4.598	99.7	171.9	--	6/54.9	70.3	125.0	46.9	8.57
1984/85	.79	2.83	2.80	4.854	138.6	187.3	--	6/60.5	62.1	122.6	64.7	8.04
1985/86*	1.24	2.51	2.49	5.414	134.9	201.8	--	6/65.8	58.7	124.5	77.3	6.53
1986/87*	1.26	2.38	2.36	5.651	133.4	213.3	--	6/76.3	85.4	161.7	51.6	3.75
1987/88*	1.38	2.35	2.33	5.482	127.7	181.9	--	6/78.8	78.0	157.8	24.1	7.00-8.00
	Mil. acres				Bu/acre				Mil. bu			
<b>Corn</b>												
1982/83	2.1	81.9	72.7	113.2	8,235	10,772	4,521	896	1,834	7,249	3,523	2.55
1983/84	32.2	60.2	51.5	81.1	6,175	7,700	3,818	975	1,901	6,694	1,006	3.21
1984/85	3.9	80.5	71.9	106.7	7,674	8,684	4,079	1,091	1,865	7,036	1,648	2.63
1985/86*	5.4	83.4	75.2	118.0	8,877	10,536	4,095	1,160	1,241	6,496	4,040	2.23
1986/87*	13.6	76.7	69.2	119.3	8,253	12,294	4,717	1,191	1,504	7,412	4,882	1.50
1987/88*	21.1	65.7	59.2	119.4	7,064	11,948	4,900	1,225	1,700	7,825	4,123	1.65-1.85
	Mil. acres				Bu/acre				Mil. bu			
<b>Sorghum</b>												
1982/83	0.7	16.0	14.1	59.1	835	1,154	495	10	210	715	439	2.47
1983/84	5.7	11.9	10.0	48.7	488	927	385	10	245	640	287	2.74
1984/85	.6	17.3	15.4	56.4	866	1,154	539	18	281	854	300	2.32
1985/86*	.8	16.3	16.8	66.8	1,120	1,420	664	28	178	869	551	1.93
1986/87*	2.3	15.3	13.9	67.7	942	1,493	548	15	198	761	732	1.37
1987/88*	3.8	11.8	10.6	69.9	741	1,472	550	15	225	780	682	1.50-1.70
	Mil. acres				Bu/acre				Mil. bu			
<b>Barley</b>												
1982/83	0.4	9.5	9.0	57.2	516	675	241	170	47	458	217	2.18
1983/84	1.1	10.4	9.7	52.0	509	733	282	170	92	544	189	2.47
1984/85	.5	12.0	11.2	53.4	599	799	304	170	77	551	247	2.29
1985/86*	.7	13.2	11.6	51.0	591	848	333	169	22	523	325	1.98
1986/87*	1.8	13.1	12.0	50.8	611	942	276	174	137	586	336	1.61
1987/88*	2.9	11.0	10.0	52.6	527	873	275	175	115	569	308	1.75-1.85
	Mil. acres				Bu/acre				Mil. bu			
<b>Oats</b>												
1982/83	0.1	14.0	10.3	57.8	583	748	441	85	3	529	220	1.49
1983/84	.3	20.3	8.1	52.6	477	727	466	78	-2	546	181	1.62
1984/85	.1	12.4	8.2	58.0	474	689	433	74	1	508	180	1.67
1985/86*	.1	13.3	8.2	63.7	521	728	460	82	-2	544	184	1.23
1986/87*	.4	14.7	6.9	56.3	386	603	395	73	3	471	133	1.21
1987/88*	1.0	18.0	6.9	54.0	374	542	350	75	1	426	116	1.50-1.60
	Mil. acres				Bu/acre				Mil. bu			
<b>Soybeans</b>												
1982/83	0	70.9	69.4	31.5	2,190	2,444	7/86	1,108	905	2,099	345	5.69
1983/84	0	63.8	62.5	26.2	1,636	1,981	7/79	983	743	1,805	176	7.83
1984/85	0	67.8	66.1	28.1	1,861	2,037	7/93	1,030	598	1,721	316	5.84
1985/86*	0	63.1	61.6	34.1	2,099	2,415	7/86	1,053	740	1,879	526	5.05
1986/87*	0	60.4	59.3	33.3	1,940	2,476	7/104	1,179	757	2,040	436	4.80
1987/88*	0	57.4	56.4	33.7	1,905	2,341	7/96	1,170	760	2,036	315	5.35-5.75
	Mil. acres				Bu/acre				Mil. bu			
<b>Soybean oil</b>												
1982/83	--	--	--	--	12,041	13,144	--	9,958	2,025	11,883	1,261	20.6
1983/84	--	--	--	--	10,872	12,133	--	9,588	1,824	11,412	721	30.6
1984/85	--	--	--	--	11,468	12,209	--	9,917	1,660	11,577	632	29.5
1985/86*	--	--	--	--	11,617	12,257	--	10,053	1,257	11,310	947	18.0
1986/87*	--	--	--	--	12,783	13,745	--	10,833	1,187	12,020	1,725	15.4
1987/88*	--	--	--	--	12,880	14,605	--	11,000	2,205	13,205	1,400	18.0-21.0
	Mil. lbs				B/ Cts/lb							
<b>Soybean meal</b>												
1982/83	--	--	--	--	26,714	26,889	--	19,306	7,109	26,415	474	187
1983/84	--	--	--	--	22,756	23,230	--	17,615	5,360	22,975	255	188
1984/85	--	--	--	--	24,529	24,784	--	19,480	4,917	24,397	387	125
1985/86*	--	--	--	--	24,951	25,338	--	19,090	6,036	25,126	212	155
1986/87*	--	--	--	--	27,758	27,870	--	20,387	7,343	27,730	240	163
1987/88*	--	--	--	--	28,010	28,050	--	21,050	6,700	27,750	300	170-190
	Thou. tons				B/ \$/ton							

See footnotes at end of table.

Table 17.— Supply & Utilization, continued

	Area			Production	Total Supply	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price \$/b
	Set aside	Planted	Harvested	%/							
	M:t. acres			Lb/acres			Mill. bales			Cts/lb	
Cotton 10/											
1982/83	1.6	11.3	9.7	590	12.0	18.6	--	5.8	5.2	10.7	59.5
1983/84	6.8	7.9	7.3	508	7.8	15.7	--	5.9	6.8	12.7	55.3
1984/85	2.5	11.1	10.4	600	13.0	15.8	--	5.5	6.2	11.8	58.7
1985/86*	3.6	10.7	10.2	630	13.4	17.6	--	6.4	2.0	8.4	56.5
1986/87*	3.0	10.0	8.5	552	9.7	19.1	--	7.4	6.7	14.1	52.2
1987/88*	3.1	10.4	10.0	703	14.7	19.8	--	7.8	6.9	14.7	52.2

\*March 9, 1988 Supply and Demand Estimates. 1/ Marketing year beginning June 1 for wheat, barley, and oats; August 1 for cotton and rice; September 1 for soybeans, corn, and sorghum; October 1 for soymeal, and soyoil. 2/ Conversion factors: Hectares (ha.) = 2.471 acres, 1 metric ton = 2204.622 pounds, 36.7437 bushels of wheat or soybeans, 39.3679 bushels of corn or sorghum, 45.9296 bushels of barley, 68.8944 bushels of oats, 22.046 cwt. of rice, and 4,984 480-pound bales of cotton. 3/ Includes diversion, PIK, and acreage reduction Programs. 4/ Includes imports. 5/ Market average prices do not include an allowance for loans outstanding and Government purchases. 6/ Residuals included in domestic use. 7/ Includes seed. 8/ Average of crude soybean oil, Decatur. 9/ Average of 44 percent, Decatur. 10/ Upland and extra long staple. Stock estimates based on Census Bureau data which results in an unaccounted difference between supply and use estimates and changes in ending stocks.

Information contact: Commodity Economics Division, Crops Branch (202) 786-1840.

Table 18.—Food Grains

	Marketing year 1/				1987					1988	
	1983/84	1984/85	1985/86	1986/87	Jan	Sept	Oct	Nov	Dec	Jan	
<b>Wholesale prices</b>											
Wheat, No. 1 HRW, Kansas City (\$/bu) 2/	3.84	3.74	3.28	2.72	2.70	2.78	2.90	2.90	3.70	3.20	
Wheat, DNS, Minneapolis (\$/bu) 2/	4.21	3.70	3.25	2.62	2.82	2.74	2.85	2.81	2.96	3.12	
Rice, S.W. La. (\$/cwt) 3/	19.38	17.98	16.11	10.25	10.13	12.25	17.70	19.75	19.70	20.60	
<b>Wheat</b>											
Exports (mil bu)	1,429	1,424	915	1,004	73	124	105	79	118	NA	
Hill grind (mil bu)	694	676	711	779	62	67	71	68	64	NA	
Wheat flour production (mil cwt)	308	301	320	351	28	30	32	30	28	NA	
<b>Rice</b>											
Exports (mil cwt, rough equiv)	70.3	62.1	58.7	85.4	4.9	4.5	10.0	8.0	14.5	NA	
<b>Marketing year 1/</b>											
	1984/85	1985/86	1986/87		Jun-Aug	Sept-Nov	Dec-Feb	Mar-May	Jun-Aug	Sept-Nov	Dec-Feb
<b>Wheat</b>											
Stocks, beginning (mil bu)	1,399	1,425	1,905	1,905.0	3,154.6	2,671.5	2,249.8	1,820.9	2,988.5	2,505.9	
Domestic use:											
Food (mil bu)	651	683	714	174.1	192.2	177.2	180.3	184.9	196.1	NA	
Feed & seed (mil bu) 4/	502	363	548	346.8	31.1	47.6	38.7	345.5	-17.7	NA	
Exports (mil bu)	1,424	915	1,004	320.6	263.4	202.7	216.8	409.9	308.5	NA	

1/ Beginning June 1 for wheat and August 1 for rice. 2/ Ordinary protein. 3/ Long-grain, milled basis. 4/ Feed use approximated by residual. NA = not available.

Information contacts: Ed Allen and Janet Livezey (202) 786-1840.

Table 19.—Cotton

	Marketing year 1/				1987					1988	
	1983/84	1984/85	1985/86	1986/87	Jan	Sept	Oct	Nov	Dec	Jan	
U.S. price, \$/lb, 1-1/16 in. (cts/lb) 2/	73.1	60.5	60.0	53.2	57.2	71.4	64.3	64.7	62.3	59.7	
Northern Europe prices:											
Index (cts/lb) 3/	87.6	69.2	48.9	62.0	65.7	83.6	76.2	75.8	75.3	72.2	
U.S. M 1-3/32 in. (cts/lb) 4/	87.1	73.9	64.8	61.8	65.3	83.1	76.8	76.4	75.0	72.8	
U.S. mill consumption (thou bales)	5,927	5,545	6,399	7,452	621	694	650	635	645	613	
Exports (thou bales)	6,786	6,201	1,969	6,684	747	315	367	615	721	733	
Stocks, beginning (thou bales)	7,937	2,775	4,102	9,348	12,677	4,381	6,218	9,660	12,058	12,947	

1/ Beginning August 1. 2/ Average spot market. 3/ Liverpool Outlook (A) index: average of 5 lowest priced of 11 selected growths. 4/ Memphis territory growths.

Information contact: Bob Skinner (202) 786-1840.

Table 20.—Feed Grains

	Marketing year 1/				1987					1988
	1983/84	1984/85	1985/86	1986/87	Jan	Sept	Oct	Nov	Dec	Jan
<b>Wholesale Prices</b>										
Corn, No. 2 yellow, Chicago (\$/bu)	3.46	2.79	2.35	1.64	1.57	1.62	1.73	1.86	1.89	1.95
Sorghum, No. 2 yellow, Kansas City (\$/cwt)	5.22	4.46	3.72	2.73	2.50	2.65	2.75	2.90	2.95	3.05
Barley, feed, Minneapolis (\$/bu) 2/	2.48	2.09	1.53	1.44	NA	1.76	1.78	1.82	1.74	1.72
Barley, malting, Minneapolis (\$/bu)	2.84	2.55	2.24	1.89	1.81	1.88	2.08	2.05	2.01	2.02
<b>Exports</b>										
Corn (mil bu)	1,902	1,865	1,241	1,504	105	136	139	123	149	NA
Feed grains (mil metric tons) 3/	56.5	56.6	36.6	46.3	3.4	4.1	4.3	3.8	4.2	NA
<b>Marketing year 1/</b>										
	1983/84	1984/85	1985/86	1986/87	1986		1987			
Corn	1983/84	1984/85	1985/86	1986/87	June-Aug	Sept-Nov	Dec-Feb	Mar-May	Jun-Aug	Sept-Nov
Stocks, beginning (mil bu)	3,523	1,006	1,648	4,040	4,990	4,040	10,306	8,248	6,332	4,882
Domestic use:										
Feed (mil bu)	3,818	4,079	4,095	4,717	494	1,384	1,472	1,091	768	1,494
Food, seed, ind. (mil bu)	975	1,091	1,160	1,191	308	280	270	325	315	287
Exports (mil bu)	1,902	1,865	1,241	1,504	154	321	315	500	368	398
Total use (mil bu)	6,694	7,036	6,496	7,410	956	1,985	2,058	1,917	1,451	2,179

1/ September 1 for corn and sorghum; June 1 for oats and barley. 2/ Beginning March 1987 reporting point changed from Minneapolis to Duluth. 3/ Aggregated data for corn, sorghum, oats, and barley. NA = not available.

Information contact: Larry Van Meir (202) 786-1840.

Table 21.—Fats &amp; Oils

	Marketing year 1/				1986					1987		
	1983/84	1984/85	1985/86	1986/87	Dec	Aug	Sept	Oct	Nov	Dec		
<b>Soybeans</b>												
Wholesale price, No. 1 yellow, Chicago (\$/bu) 2/	7.78	5.88	5.20	5.03	4.86	5.02	5.14	5.18	5.53	5.85		
Cruelings (mil bu)	982.7	1,030.5	1,052.8	1,178.8	107.6	82.4	79.7	102.5	111.2	110.8		
Exports (mil bu)	742.8	600.7	740.7	756.9	89.0	54.5	56.7	97.9	98.1	76.7		
Stocks, beginning (mil bu)	344.6	175.7	316.0	536.0	127.4	49.8	31.2	65.7	158.5	155.5		
<b>Soybean oil</b>												
Wholesale price, crude,												
Decatur (cts/lb)	30.55	29.52	18.02	15.36	14.94	15.16	15.58	17.03	17.55	19.00		
Production (mil lb)	10,862.8	11,467.9	11,617.3	12,783.1	1,152.2	891.3	881.4	1,119.7	1,207.1	1,208.1		
Domestic disp. (mil lb)	9,589.6	9,888.5	10,045.8	10,820.1	891.8	839.0	911.0	1,083.9	895.1	857.1		
Exports (mil lb)	1,813.7	1,659.9	1,257.3	1,184.5	22.8	261.0	224.8	100.1	139.0	134.0		
Stocks, beginning (mil lb)	1,260.9	720.5	632.5	946.6	1,268.9	2,184.2	1,979.4	1,725.0	1,660.6	1,833.7		
<b>Soybean meal</b>												
Wholesale price, 44% protein,												
Decatur (\$/ton)	188.21	125.46	154.88	162.61	149.60	169.80	177.20	185.50	206.60	214.80		
Production (thou ton)	22,756.2	24,529.9	24,951.3	27,758.8	2,527.3	1,948.9	1,887.7	2,439.4	2,667.8	2,649.3		
Domestic disp. (thou ton)	17,538.8	19,481.3	19,117.2	20,382.4	1,786.4	1,559.5	1,744.2	2,151.6	2,113.9	2,012.6		
Exports (thou ton)	5,436.1	4,916.5	6,009.3	7,343.0	887.8	382.0	204.6	260.4	509.7	652.3		
Stocks, beginning (thou ton)	474.1	255.4	386.9	211.7	387.3	292.9	301.3	240.2	257.6	311.8		
<b>Margarine, wholesale price,</b>												
Chicago, white (cts/lb)	46.3	55.5	51.2	40.3	38.55	39.20	40.00	41.69	42.65	44.20		

1/ Beginning September 1 for soybeans; October 1 for soymeal and oil; calendar year for margarine. 2/ Beginning April 1, 1982, prices based on 30-day delivery, using upper end of the range.

Information contacts: Roger Hoskin (202) 786-1840; Tom Bickerton (202) 786-1824.

Table 22.—Farm Programs, Price Supports, Participation & Payment Rates

Target Price	Loan rate	Findlay loan rate	Payment rates			Base acres	Program 1/	Partici- pation rate 2/
			Deficiency	Paid land diver- sion	PIK			
			\$/bu.	Percent	\$/A. acres			
<b>Wheat</b>								
1983/84	4.30	3.65		.65	2.70	95	15/5/10-30	78/78/51
1984/85	4.38	3.30		1.00	2.70	.85	20/10/10-20	60/60/20
1985/86	4.38	3.30		1.08	2.70		20/10/0	73
1986/87 4/	4.38	3.00	2.40	1.98	2.00	1.10	22.5/2.5/5-10	89/89/21
1987/88	4.38	2.85	2.28	1.78			27.5/0/0	87
1988/89	4.23	2.76	2.21	1.53			27.5/0/0	
<b>Rice</b>								
1983/84	11.40	8.14		2.77	2.70	80	3.95	15/5/10-30
1984/85	11.90	8.00		3.76			4.16	25/0/0
1985/86	11.90	8.00	5/3.16	3.90	3.50		4.23	20/15/0
1986/87 4/	11.90	7.20	5/3.82	4.70			4.20	35/0/0
1987/88	11.66	6.84	5/5.75	4.82			4.20	35/0/0
1988/89	11.15	6.63	5/7.00	1.65			4.22	25/0/0
<b>Corn</b>								
1983/84	2.86	2.65		0	1.50	80	82.6	10/10/10-30
1984/85	3.03	2.55		.43			80.8	10/0/0
1985/86	3.03	2.55		.48			84.7	10/0/0
1986/87 4/	3.03	2.40	1.92	1.11	.73		81.9	17.5/2.5/0
1987/88	3.03	2.28	.182	1.21	2.00		83.3	20/15/0
1988/89	2.93	2.21	1.77	1.10	1.75			20/10/0; 0/52
<b>Sorghum</b>								
1983/84	2.72	2.52		0	1.50	80	18.0	6/[same]
1984/85	2.88	2.42		.46			18.2	42
1985/86	2.88	2.42		.46			19.3	55
1986/87 4/	2.88	2.28	1.82	1.06	.65		18.7	75
1987/88	2.88	2.18	1.74	1.14	1.90		18.1	83/42
1988/89	2.78	2.10	1.68	1.08	1.65			
<b>Barley</b>								
1983/84	2.60	2.16		.21	1.00		11.0	6/[same]
1984/85	2.60	2.08		.26			11.6	44
1985/86	2.60	2.08		.52			13.3	57
1986/87 4/	2.60	1.95	1.56	1.04	.57		12.4	73
1987/88	2.60	1.86	1.49	1.11	1.60		12.9	62/23
1988/89	2.61	1.80	1.44	.76	1.40			
<b>Oats</b>								
1983/84	1.60	1.36		.11	.75		8.8	6/[same]
1984/85	1.60	1.31		0			9.8	14
1985/86	1.60	1.31		.29			9.4	14
1986/87 4/	1.60	1.24	.99	.50	.36		9.5	37
1987/88	1.60	1.18	.94	.55	.80		8.7	44/15
1988/89	1.55	1.13	.90	.30				5/0/0; 0/82
<b>Soybeans</b> 7/								
1983/84		5.02						
1984/85		5.02						
1985/86		5.02						
1986/87 4/		4.77						
1987/88		4.77						
1988/89								
<b>Upland cotton</b>								
1983/84	76.0	55.00		12.10	25.00	85	15.4	20/5/10-30
1984/85	81.0	55.00		18.60			15.6	25/0/0
1985/86	81.0	57.30		23.70	30.00		15.8	20/10/0
1986/87 4/	81.0	85.00	8/44.00	26.00			15.5	25/0/0
1987/88	79.4	52.25	9/	17.3			15.5	25/0/0
1988/89	75.9	51.80		16.00			15.3	12.5/0/0

1/ Percentage of base acres farmers participating in acreage Reduction Programs/Paid Land Diversion/PIK were required to devote to conserving uses to receive program benefits. In addition to the percentages shown for 1983/84, farmers had the option of submitting bids to retire their entire base acreages. 2/ Percentage of base acres enrolled in acreage Reduction Programs/Paid Land Diversion/PIK. 3/ Percent of program yield, except 1986/87 wheat, which is dollars per bushel. 1983 and 1984 PIK rates apply only to the 10-30 and 10-20 portions, respectively. 4/ Payment rates for payments received in cash were reduced by 4.3 percent in 1986/87 due to Gramm-Rudman-Hollings. 5/ Annual average world market price. 6/ The sorghum, oats and barley programs were the same as for corn each year except 1983/84, when PIK was not offered on barley and oats, and in 1988 for oats. 7/ There are no target acreage programs, or payment rates for soybeans. 8/ Loan repayment rate. 9/ Loans may be repaid at the lower of the loan rate or world market prices.

Information contact: Larry Van Mair (202) 786-1640.

Table 23.—Fruit

	Calendar years											
	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987 P
<b>Citrus</b>												
Production (thou ton)	15,242	14,255	13,329	16,484	15,105	12,057	13,508	10,792	10,488	11,074	11,952	12,580
Per capita consumption (lbs) 1/	117.2	124.5	107.4	108.5	112.7	104.7	109.6	120.2	102.8	115.7	109.8	NA
<b>Non Citrus</b>												
Production (thou tons)	11,846	12,274	12,460	13,689	15,152	12,961	14,217	14,154	14,292	14,188	13,916	15,333
Per capita consumption (lbs) 1/	84.2	84.3	82.5	85.8	87.3	88.1	89.0	89.0	93.7	92.6	85.3	NA
1987												
	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan
<b>F.O.B. shipping point prices</b>												
Apples (\$/carton) 2/	14.00	14.50	18.35	16.63	17.60	14.34	11.60	NA	7.93	7.83	8.98	7.75
Pears (\$/box) 3/	15.63	14.75	14.10	15.28	21.00	NA	NA	NA	12.00	10.82	9.70	9.26
Oranges (\$/box) 4/	4.83	4.68	5.15	5.62	6.47	6.29	6.18	6.01	7.36	10.23	5.45	6.19
Grapefruit (\$/box) 4/	4.72	2.64	1.85	2.27	4.34	5.58	5.95	5.07	5.07	6.81	5.84	5.34
<b>Stocks, ending</b>												
Fresh apples (mil lbs)	1,720.2	1,174.0	751.9	386.3	203.8	74.9	4.1	2,684.2	5,466.0	4,684.9	3,944.3	3,758.9
Fresh pears (mil lbs)	127.1	82.1	53.7	21.1	1.7	11.8	195.2	505.4	425.8	338.8	278.4	198.1
Frozen fruits (mil lbs)	563.0	497.7	495.6	510.6	625.9	865.7	908.3	908.7	957.9	943.1	858.2	791.6
Frozen orange juice (mil lbs)	1,015.7	937.1	994.8	1,112.6	1,108.6	945.9	797.6	843.2	670.7	569.0	662.4	973.2

1/ Per capita consumption for total U.S. population, including military consumption of both fresh and processed fruit in fresh weight equivalent. 2/ Red Delicious, Washington, extra fancy, carton tray pack, 80-113's. 3/ D'Anjou, Washington, standard box wrapped, U.S. No. 1, 90-135's. 4/ U.S. equivalent on-tree returns. P = preliminary. NA = not available.

Information contact: Ben Huang (202) 786-1885.

Table 24.—Vegetables

	Calendar years											
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	
<b>Production</b>												
Total vegetables (1,000 cwt) 1/	382,165	413,825	381,370	379,123	431,515	403,320	457,392	453,769	445,436	462,402		
Fresh (1,000 cwt) 1/ 2/	182,563	190,859	190,228	194,694	207,924	187,919	217,132	217,932	216,267	218,190		
Processed (tons) 3/	9,980,100	11,153,300	9,557,100	9,221,460	11,179,590	10,270,050	12,013,020	11,791,860	11,616,560	12,210,580		
Mushrooms (1,000 lbs)	454,007	470,068	469,576	517,146	490,826	561,531	595,681	587,956	NA	NA		
Potatoes (1,000 cwt)	366,314	342,447	302,857	338,591	355,131	333,911	362,612	407,109	361,511	385,774		
Sweetpotatoes (1,000 cwt)	13,115	13,370	10,953	12,799	14,833	12,083	12,986	14,853	12,674	12,103		
Dry edible beans (1,000 cwt)	18,935	20,552	26,729	32,751	26,563	19,520	21,070	22,175	22,886	26,309		
1987												
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
<b>Shipments</b>												
Fresh (1,000 cwt) 4/	20,607	18,066	22,286	20,011	23,887	25,745	23,791	17,075	20,213	16,104	15,445	18,946
Potatoes (1,000 cwt)	14,569	10,881	15,668	13,560	12,165	12,622	7,631	8,514	11,384	9,718	11,021	10,756
Sweetpotatoes (1,000 cwt)	279	259	293	299	177	98	34	136	322	359	195	518

1/ 1983 data are not comparable with 1984 and 1985. 2/ Estimate reinstated for asparagus with the 1984 crop; all other years also include broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeydews, onions, and tomatoes. 3/ Estimates reinstated for cucumbers with the 1984 crop; all other years also include snap beans, sweet corn, green peas, and tomatoes. 4/ Includes snap beans, broccoli, cabbage, carrots, cauliflower, celery, sweet corn, cucumbers, eggplant, lettuce, onions, bell peppers, squash, tomatoes, cantaloupes, honeydews, and watermelons. NA = not available.

Information contact: Shannon Hamm or Cathy Greene (202) 786-1884.

Table 25.—Other Commodities

	Annual											
	1983	1984	1985	1986	1987 P	Oct-Dec	Jan-Mar	Apr-June	July-Sept	Oct-Dec		
<b>Sugar</b>												
Production 1/	5,682	5,890	5,969	6,257	7,278	3,231	2,024	766	866	3,622		
Deliveries 1/	8,812	8,454	8,035	7,786	8,172	1,991	1,908	2,002	2,146	2,116		
Stocks, ending 1/	2,570	3,005	3,126	3,227	965	3,227	3,497	2,476	1,497	965		
<b>Coffee</b>												
Composite green price N.Y. (cts/lb)	131.51	142.95	137.46	185.18	108.94	159.69	115.38	105.91	99.16	115.32		
Imports, green bean equiv. (mil lbs) 2/	2,259	2,411	2,550	2,596	2,638	498	563	790	645	640		
Annual												
	1984	1985	1986	Nov	June	July	Aug	Sept	Oct	Nov	Dec	
<b>Tobacco</b>												
Prices at auctions 3/												
Flue-Cured (\$/lb)	1.81	1.72	1.52	1.40	NQ	NQ	1.47	1.65	1.66	1.42		
Burley (\$/lb)	1.88	1.69	1.57	1.57	NQ	NQ	NQ	NQ	NQ	1.58		
Domestic consumption 4/												
Cigarettes (bbl)	600.4	594.0	584.0	49.2	61.8	37.8	49.8	51.0	48.6	52.6		
Large cigars (mil)	3,493	3,226	3,090	220.9	290.7	193.0	220.2	253.7	250.7	213.6		

1/ 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2/ Net imports of green and processed coffee. 3/ Crop year July-June for flue-cured; October-September for burley. 4/ Taxable removals. P = preliminary. NQ = no quote.

Information contacts: (sugar) Dave Harvey (202) 786-1888; (coffee) Fred Gray (202) 786-1888; (tobacco) Verner Grise (202) 786-1890.

# World Agriculture

Table 26.—World Supply & Utilization of Major Crops, Livestock, & Products

	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87 P	1987/88 F
Million units							
<b>Wheat</b>							
Area (hectare)	238.7	237.7	229.1	231.4	229.3	227.9	219.0
Production (metric ton)	449.5	477.5	489.4	511.5	499.2	529.4	501.7
Exports (metric ton) 1/	101.3	98.7	102.0	107.0	84.8	91.3	103.2
Consumption (metric ton) 2/	443.6	462.2	474.2	492.6	495.2	520.4	527.4
Ending stocks (metric ton) 3/	87.0	102.3	145.2	164.1	168.0	176.8	151.1
<b>Coarse grains</b>							
Area (hectare)	349.9	339.7	335.3	335.5	340.6	335.8	324.1
Production (metric ton)	766.0	784.4	687.2	814.5	842.0	832.9	789.9
Exports (metric ton) 1/	96.6	89.6	93.3	100.4	83.2	83.6	86.3
Consumption (metric ton) 2/	737.7	753.1	758.3	781.8	777.3	806.7	819.0
Ending stocks (metric ton) 3/	120.7	151.8	110.4	143.1	207.8	234.0	204.8
<b>Rice, milled</b>							
Area (hectare)	145.2	141.1	144.3	144.4	144.9	144.8	142.3
Production (metric ton)	280.6	285.7	308.0	319.2	319.0	317.7	301.9
Exports (metric ton) 4/	11.8	11.9	12.6	11.5	12.8	12.5	10.4
Consumption (metric ton) 2/	281.5	290.3	305.1	310.8	320.0	322.3	312.3
Ending stocks (metric ton) 3/	21.3	17.3	46.7	54.8	53.8	49.2	38.8
<b>Total grains</b>							
Area (hectare)	733.8	718.5	708.7	711.3	714.8	708.5	685.4
Production (metric ton)	1,496.1	1,547.6	1,484.6	1,645.2	1,660.2	1,679.7	1,593.5
Exports (metric ton) 1/	209.7	200.2	207.9	218.9	180.8	187.4	199.9
Consumption (metric ton) 2/	1,462.8	1,505.6	1,537.6	1,585.2	1,592.5	1,649.4	1,650.7
Ending stocks (metric ton) 3/	229.0	271.4	302.3	362.0	429.6	460.0	394.7
<b>Oilseeds</b>							
Crush (metric ton)	138.9	143.5	135.8	150.4	154.4	159.9	165.7
Production (metric ton)	169.4	178.2	165.0	191.0	195.8	194.3	203.8
Exports (metric ton)	35.9	35.2	33.0	33.0	34.4	37.5	38.3
Ending stocks (metric ton)	13.5	20.5	15.7	21.2	26.7	23.7	22.5
<b>Meals</b>							
Production (metric ton)	94.5	98.1	92.5	101.7	104.5	109.0	113.3
Exports (metric ton)	28.8	31.6	29.7	32.3	34.3	36.0	36.1
<b>Oils</b>							
Production (metric ton)	41.6	43.4	42.1	46.1	49.2	49.9	51.7
Exports (metric ton)	13.4	14.0	13.7	15.5	16.3	16.6	16.9
<b>Cotton</b>							
Area (hectare)	33.0	31.4	31.0	33.9	31.9	30.2	32.4
Production (bale)	71.2	68.1	67.7	88.1	79.6	70.5	79.2
Exports (bale)	20.2	19.4	19.2	20.5	20.5	25.9	24.1
Consumption (bale)	66.2	68.3	68.7	70.4	76.7	83.0	82.1
Ending stocks (bale)	25.2	25.1	25.1	41.6	45.3	32.4	29.3
	1982	1983	1984	1985	1986	1987 P	1988 F
<b>Red meat</b>							
Production (mil metric tons)	94.8	97.5	99.3	103.3	105.6	105.4	107.0
Consumption (mil metric tons)	93.3	95.8	97.4	101.2	104.7	103.8	105.8
Exports (mil metric tons) 1/	5.8	5.9	5.9	6.2	6.6	6.5	6.7
<b>Poultry</b>							
Production (mil metric tons)	23.7	24.4	25.2	26.2	27.3	29.0	30.3
Consumption (mil metric tons)	23.3	24.3	24.8	25.9	26.9	28.5	29.8
Exports (mil metric tons) 1/	1.4	1.3	1.3	1.2	1.3	1.4	1.5
<b>Dairy</b>							
Milk production (mil metric tons)	396.9	413.0	413.4	417.8	423.9	419.0	421.9

1/ Excludes intra-EC trade. 2/ Where stocks data not available (excluding USSR), consumption includes stock changes. 3/ Stocks data are based on differing marketing years and do not represent levels at a given date. Data not available for all countries; includes estimated change in USSR grain stocks but not absolute level. 4/ Calendar year data. 1982 data correspond with 1981/82, etc. P = preliminary. F = forecast.

Information contacts: Frederic Burris (202) 786-1824; (red meat & poultry) Linda Bailey (202) 786-1286; (dairy) Sara Short (202) 786-1769.

# U.S. Agricultural Trade

Table 27.—Prices of Principal U.S. Agricultural Trade Products

Export commodities	Annual			1987					1988	
	1985	1986	1987	Jan	Aug	Sept	Oct	Nov	Dec	Jan
Wheat, f.o.b. vessel,										
Gulf Ports (\$/bu)	3.73	3.19	3.11	3.00	2.95	3.09	3.17	3.17	3.43	3.53
Corn, f.o.b. vessel, Gulf Ports (\$/bu)	2.89	2.27	1.95	1.77	1.82	1.89	2.02	2.10	2.13	2.22
Grain sorghum,										
f.o.b. vessel, Gulf ports (\$/bu)	2.64	2.16	1.88	1.75	1.74	1.78	1.89	2.01	1.98	2.06
Soybeans, f.o.b. vessel, Gulf Ports (\$/bu)	5.83	5.45	5.55	5.13	5.51	5.53	5.55	5.88	6.16	6.45
Soybean oil, Decatur (cts/lb)	27.03	16.36	15.85	15.45	14.93	15.26	16.78	17.16	18.77	21.64
Soybean meal, Decatur (\$/ton)	127.15	157.62	175.57	147.65	168.93	178.96	185.86	209.45	214.51	193.30
Cotton, 8 market avg, spot (cts/lb)	58.55	53.47	64.35	57.17	75.89	71.41	64.22	64.81	62.25	59.70
Tobacco, avg. price at auction (cts/lb)	172.05	153.93	147.25	144.67	141.45	152.15	152.84	152.38	152.61	150.08
Rice, f.o.b. mill, Houston (\$/cwt)	18.49	14.60	13.15	11.13	10.50	11.75	19.44	21.00	21.00	21.00
Inedible tallow, Chicago (cts/lb)	14.33	9.03	13.79	10.69	14.50	15.53	15.23	15.17	15.56	17.19
Import commodities										
Coffee, N.Y. spot (\$/lb)		1.42	2.01	1.08	1.27	.96	.97	1.05	1.19	1.19
Rubber, N.Y. spot (cts/lb)		41.91	42.87	50.65	45.93	53.73	54.17	53.76	53.10	54.01
Cocoa beans, N.Y. (\$/lb)		.99	.88	.87	.86	.89	.87	.84	.84	.86

Information contact: Mary Teymourian (202) 786-1820.

Table 28.—Indexes of Nominal & Real Trade-Weighted Dollar Exchange Rates

	1987											1988	
	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	
March 1973=100													
Total U.S. trade 1/													
Nominal	99	99	97	96	98	99	99	97	97	92	90	91	
April 1971=100													
Agricultural trade													
Nominal 2/	6.102	6.854	7.783	9.838	12.507	14.245	14.933	15.794	16.859	18.559	21.384	24.555	
Real 3/	85	85	83	83	85	85	85	84	83	81	80	80	
Soybeans													
Nominal 2/	327	343	358	374	394	412	428	444	460	491	600	596	
Real 3/	71	71	69	69	70	71	71	69	69	66	65	64	
Wheat													
Nominal 2/	34.601	39.700	44.815	57.302	73.477	83.997	88.101	93.144	99.717	109.724	126.159	145.327	
Real 3/	104	106	103	104	106	106	104	103	102	99	97	99	
Corn													
Nominal 2/	5.631	6.407	7.158	9.020	11.436	13.013	13.642	14.427	15.392	16.943	19.547	22.412	
Real 3/	76	76	74	73	74	75	74	73	72	69	69	69	
Colton													
Nominal 2/	230	233	272	270	269	269	269	292	267	280	282	282	
Real 3/	90	90	89	87	87	88	87	86	86	85	83	83	

1/ Federal Reserve Board index of trade-weighted exchange value of the U.S. dollar against 10 other major industrial country currencies, plus Switzerland. These currencies dominate the financing of U.S. total trade. 2/ Nominal values are percentage changes in currency units per dollar, weighted by proportion of agricultural exports from the United States. An increase indicates that the dollar has appreciated. 3/ The real index deflates the nominal series by consumer price changes of the countries involved, resulting in divergence between nominal and real indexes when high-inflation countries figure significantly. The nominal Federal Reserve index shows little divergence between nominal and real indexes because of similar inflation rates among the countries included. \*Preliminary.

Information contact: Edward Wilson (202) 786-1790

Table 29.—Trade Balance

	Fiscal years*										Dec
	1980	1981	1982	1983	1984	1985	1986	1987	1988 F		
<b>Exports</b>											
Agricultural	40,481	43,780	39,095	34,769	38,027	31,201	26,307	27,874	32,000	2,959	
Nonagricultural	169,846	185,423	176,310	159,373	170,014	179,236	176,631	199,947	NA	20,977	
Total 1/	210,327	229,203	215,405	194,142	208,041	210,437	202,938	227,821	NA	23,936	
<b>Imports</b>											
Agricultural	17,216	17,218	15,481	16,271	18,916	19,740	20,875	20,6e3	20,500	1,705	
Nonagricultural	223,590	237,469	233,353	230,629	297,726	313,722	342,855	367,381	NA	33,497	
Total 2/	240,866	254,687	248,834	246,900	316,652	330,462	363,730	388,024	NA	35,202	
<b>Trade balance</b>											
Agricultural	23,205	26,562	23,614	18,498	19,111	11,461	5,432	7,231	11,500	1,254	
Nonagricultural	-53,744	-52,046	-57,043	-71,256	-127,722	-134,486	-166,224	-167,434	NA	-12,520	
Total	-30,539	-25,484	-33,429	-52,758	-108,611	-123,025	-160,792	-160,203	NA	-11,266	

\*Fiscal years begin October 1 and end September 30. Fiscal year 1987 began Oct. 1, 1986 and ended Sept. 30, 1987.

1/ Domestic exports (including Department of Defense shipments) (f.o.b. value). 2/ Imports for consumption (customs value). F = forecast. NA = not available.

Information contact: Steve MacDonald (202) 786-1827.

Table 30.—U.S. Agricultural Exports &amp; Imports

	Fiscal years*				Dec	Fiscal years*				Dec
	1985	1986	1987	1988 F		1985	1986	1987	1988 F	
	Thousand units				\$ million					
<b>Exports</b>										
Animals, live (no. 1/	996	570	275	--	27	255	344	331	--	34
Meats & preps., excl. poultry (mt)	427	451	549	2,500	50	906	1,012	1,300	--	125
Dairy products (mt)	423	480	445	--	20	414	430	490	500	27
Poultry meats (mt)	234	265	376	400	33	257	282	406	--	33
Fats, oils, & greases (mt)	1,217	1,355	1,220	3/1,100	146	608	477	417	--	52
Hides & skins, incl. furskins	--	--	--	--	--	1,325	1,440	1,666	--	156
Cattle hides, whole (no. 1/	25,456	25,596	24,337	--	2,083	1,019	1,131	1,254	--	120
Mink pelts (no. 1/	2,237	2,697	2,761	--	175	60	65	103	--	4
Grains & feeds (mt)	93,903	74,358	90,411	--	9,065	13,285	9,470	9,061	4/11,900	934
Wheat (mt)	28,523	25,500	28,233	37,500	3,086	4,264	3,260	2,881	5/4,400	311
Wheat flour (mt)	718	1,094	1,421	1,500	86	164	203	207	--	10
Rice (mt)	1,972	2,382	2,454	2,300	159	677	648	551	900	54
Feed grains, incl. products (mt)	55,362	36,261	47,658	52,300	4,665	6,884	3,817	3,749	4,600	395
Feeds & fodders (mt)	6,533	8,368	10,114	6/10,000	1,011	1,004	1,284	1,456	--	141
Other grain products (mt)	795	1,015	750	--	82	293	332	284	--	29
Fruit, nuts, & preps. (mt)	1,907	2,003	2,141	--	182	1,687	1,766	2,049	--	171
Fruit juices, incl. froz. (hl) 1/	4,641	3,652	4,356	--	299	200	148	185	--	14
Vegetables & preps. (mt)	1,420	1,449	1,639	--	180	946	998	1,178	--	118
Tobacco, unmanufactured (mt)	257	224	224	200	30	1,588	1,318	1,204	1,200	184
Cotton, excl. linters (mt)	1,277	482	1,306	1,500	157	1,945	678	1,419	2,200	244
Seeds (mt)	289	269	315	--	43	352	366	370	400	59
Sugar, cane or beet (mt)	355	375	582	--	37	65	75	113	--	8
Oilseeds & products (mt)	23,803	27,582	29,709	--	2,882	6,195	6,271	6,304	7,400	676
Oilseeds (mt)	17,086	20,684	21,855	20,000	2,138	4,324	4,394	4,411	--	474
Soybeans (mt)	16,621	20,139	21,322	20,100	2,087	3,876	4,174	4,191	4,600	453
Protein meal (mt)	4,606	5,614	6,819	6,500	610	853	1,132	1,354	1,500	138
Vegetable oils (mt)	1,311	1,284	1,035	--	134	1,018	746	538	--	64
Essential oils (mt)	12	7	8	--	1	105	105	111	--	12
Other	443	568	564	--	66	1,069	1,127	1,270	--	112
<b>Total</b>	<b>125,967</b>	<b>109,869</b>	<b>129,488</b>	<b>142,500</b>	<b>12,892</b>	<b>31,201</b>	<b>26,307</b>	<b>27,874</b>	<b>32,500</b>	<b>2,859</b>
<b>Imports</b>										
Animals, live (no. 1/	2,120	1,885	1,994	--	368	569	637	610	600	114
Meats & preps., excl. poultry (mt)	1,123	1,139	1,282	--	71	2,214	2,248	2,797	--	164
Beef & veal (mt)	674	693	778	790	31	1,295	1,252	1,575	1,600	70
Pork (mt)	416	406	462	500	36	847	900	1,125	1,100	84
Dairy products (mt)	418	400	461	465	33	763	786	849	900	88
Poultry and products 1/	--	--	--	--	--	93	101	112	--	10
Fats, oils, & greases (mt)	21	22	21	--	2	18	17	18	--	2
Hides & skins, incl. furskins 1/	--	--	--	--	--	240	200	304	--	21
Wool, unmanufactured (mt)	43	53	59	--	5	145	160	197	--	26
Grains & feeds (mt)	2,070	2,311	2,336	2,400	227	604	668	727	700	69
Fruits, nuts, & preps., excl. juices (mt)	4,483	4,637	4,835	4,800	349	1,891	1,976	2,178	--	160
Bananas & plantains (mt)	3,022	3,042	3,106	3,100	227	752	740	817	800	60
Fruit juices (hl) 1/	35,112	31,539	33,888	31,500	2,555	995	698	728	--	67
Vegetables & preps. (mt)	2,140	2,199	2,446	2,300	227	1,347	1,560	1,509	1,600	137
Tobacco, unmanufactured (mt)	191	208	224	175	15	556	606	634	500	44
Cotton, unmanufactured (mt)	31	41	38	--	3	17	14	7	--	1
Seeds (mt)	92	89	133	100	9	91	111	156	100	12
Nursery stock & cut flowers 1/	--	--	--	--	--	318	353	369	--	31
Sugar, cane or beet (mt)	2,338	1,905	1,492	1,140	50	912	654	497	--	15
Oilseeds & products (mt)	1,271	1,508	1,572	1,500	127	784	639	579	700	61
Oilseeds (mt)	253	197	165	--	15	98	69	56	--	6
Protein meal (mt)	159	138	245	--	25	17	15	30	--	4
Vegetable oils (mt)	859	1,173	1,162	--	87	670	555	493	--	51
Beverages excl. fruit juices (hl) 1/	15,494	15,488	15,549	--	1,175	1,622	1,848	1,923	--	163
Coffee, tea, cocoa, spices (mt)	1,868	1,940	1,915	--	154	4,983	6,099	4,867	--	364
Coffee, incl. products (mt)	1,128	1,223	1,207	1,200	67	3,244	4,400	3,232	3,000	167
Cocoa beans & products (mt)	539	507	503	525	71	1,203	1,169	1,088	1,100	155
Rubber & allied gums (mt)	799	801	824	840	80	680	615	714	800	83
Other	--	--	--	--	--	900	885	868	--	73
<b>Total</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>19,740</b>	<b>20,875</b>	<b>20,643</b>	<b>20,500</b>	<b>1,705</b>

\*Fiscal years begin October 1 and end September 30. Fiscal year 1987 began Oct. 1, 1986 and ended Sept. 30, 1987. -- \* not available. 1/ Not included in total volume. 2/ Forecasts for footnoted items 2/ 6/ are based on slightly different groups of commodities. Fiscal 1987 exports of categories used in the 1988 forecasts were 2/ 503 thousand mt. 3/ 1,204 thousand mt. 4/ 9,302 million. 5/ 3,086 million, i.e. includes flour. 6/ 10,003 thousand mt. F = forecast.

Information contact: Steve MacDonald (202) 786-1827.

Table 31.—U.S. Agricultural Exports by Region

Region & country	Fiscal years*				Dec 1987	Change from year* earlier				Dec 1987
	1985	1986	1987	1988 F		1985	1986	1987	1988 F	
\$ million										Percent
Western Europe	7,183	6,846	7,204	7,500	773	-22	-5	5	5	-2
European Community (EC-12)	6,668	6,431	6,773	7,100	726	-23	-4	5	5	-3
Belgium-Luxembourg	470	361	423	--	46	-44	-23	17	--	24
France	396	431	495	--	55	-22	9	15	--	22
Germany, Fed. Rep.	900	1,001	1,266	--	122	-29	11	26	--	8
Italy	677	693	733	--	88	-12	2	6	--	38
Netherlands	1,926	2,041	1,950	--	241	-14	6	-4	--	1
United Kingdom	628	628	662	--	69	-20	0	5	--	-18
Portugal	502	308	268	--	25	-28	-39	-13	--	-48
Spain, incl. Canary Islands	832	723	654	--	48	-32	-13	-10	--	-42
Other Western Europe	515	415	432	500	47	-16	-19	4	16	18
Switzerland	232	128	145	--	18	-26	-45	13	--	29
Eastern Europe	532	447	453	500	44	-28	-16	1	10	-40
German Dem. Rep.	81	52	66	--	1	-39	-36	27	--	-96
Poland	126	42	63	--	28	-36	-66	50	--	1,300
Yugoslavia	137	134	131	--	4	-24	-2	-2	--	-73
Romania	88	112	115	--	2	-43	27	3	--	-88
USSR	2,525	1,105	659	1,700	208	1	-56	-40	158	100
Asia	11,933	10,493	11,990	14,300	1,266	-22	-12	14	19	9
West Asia (Mideast)	1,452	1,243	1,664	2,000	166	-22	-14	34	20	5
Turkey	129	111	120	--	4	-42	-13	8	--	-60
Iraq	371	335	519	700	63	-12	-10	55	35	17
Israel	300	255	244	--	42	-15	-15	-4	--	180
Saudi Arabia	361	335	489	500	44	-23	-12	46	2	7
South Asia	599	517	345	--	48	-31	-14	-33	--	182
Bangladesh	205	94	111	--	4	-31	-54	18	--	0
India	129	90	93	--	15	-66	-30	3	--	114
Pakistan	228	285	98	300	27	-20	25	-66	206	100
China	239	83	235	500	17	-65	-65	183	113	325
Japan	5,663	5,139	5,553	6,200	575	-18	-9	8	12	0
Southeast Asia	842	724	707	--	85	-31	-14	-2	--	35
Indonesia	204	172	152	--	17	-53	-16	-12	--	31
Philippines	285	269	259	300	31	-5	-6	-4	16	35
Other East Asia	3,138	2,788	3,485	4,100	377	-14	-11	25	18	12
Taiwan	1,342	1,108	1,354	1,600	129	-5	-17	22	18	-21
Korea, Rep.	1,400	1,277	1,693	2,000	206	-23	-9	33	18	48
Hong Kong	396	400	436	500	40	-3	1	9	15	11
Africa	2,527	2,134	1,784	2,200	143	-12	-16	-16	23	-22
North Africa	1,207	1,401	1,279	1,600	118	-22	16	-9	25	-16
Morocco	156	159	196	--	23	-54	2	23	--	188
Algeria	220	329	244	500	45	36	50	-26	105	650
Egypt	766	875	762	900	44	-13	14	-13	18	-59
Sub-Saharan	1,320	733	505	600	26	-1	-44	-31	19	-41
Nigeria	367	158	67	--	4	6	-57	-58	--	-80
Rep. S. Africa	189	70	49	--	5	-64	-63	-30	--	-29
Latin America & Caribbean	4,570	3,598	3,767	4,000	335	-13	-21	5	6	-10
Brazil	557	445	418	400	43	27	-20	-6	-4	-36
Caribbean Islands	771	752	829	--	70	-7	-2	10	--	-10
Central America	361	334	377	--	26	-9	-7	13	--	-26
Colombia	238	137	115	--	18	8	-42	-16	--	100
Mexico	1,566	1,114	1,216	1,300	73	-20	-29	9	7	-32
Peru	106	108	140	--	20	-53	2	30	--	11
Venezuela	721	493	459	600	58	-7	-32	-7	31	45
Canada	1,727	1,466	1,787	2,000	167	-11	-15	22	12	18
Oceania	204	216	230	200	21	-6	6	6	-13	24
Total	31,201	26,307	27,874	32,500	2,959	-18	-16	6	15	8
Developed countries	15,225	13,952	15,027	16,300	1,580	-21	-8	8	10	2
Less developed countries	12,680	10,719	11,500	13,500	1,110	-15	-15	7	15	0
Centrally planned countries	3,296	1,636	1,347	2,700	269	-16	-50	-10	101	249

\*Fiscal years begin October 1 and end September 30. Fiscal year 1987 began Oct. 1, 1986 and ended Sept. 30, 1987. F = forecast.  
Note: Adjusted for transshipments through Canada.

Information contact: Steve MacDonald (202) 786-1827.

## Farm Income

Table 32.—Farm Income Statistics

	Calendar years										
	\$ billion										
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988 F
1. Farm receipts											
Crops (incl. net CCC loans)	114.3	133.8	142.0	144.1	147.1	141.1	146.7	149.3	140.2	138	140 to 144
Livestock	53.2	62.3	71.7	73.5	73.3	67.1	69.4	74.4	63.6	59	64 to 67
Farm related 1/	59.2	69.2	68.0	69.2	70.3	69.4	72.9	69.8	71.6	74	71 to 74
	1.9	2.2	2.3	2.5	4.5	4.5	4.4	5.0	5.1	5	4 to 6
2. Direct Government payments											
Cash Payments	3.0	1.4	1.3	1.9	3.5	9.3	8.4	7.7	11.8	17	13 to 15
Value of PIK commodities	3.0	1.4	1.3	1.9	3.5	4.1	4.0	7.6	8.1	8	6 to 8
	0.0	0.0	0.0	0.0	0.0	5.2	4.5	0.1	3.7	9	7 to 9
3. Total gross farm income (4+5+6) 2/											
4. Gross cash income (1+2)	128.4	150.7	149.3	166.3	163.5	153.1	174.7	166.0	159.5	163	163 to 167
5. Nonmoney income 3/	117.3	135.1	143.3	146.0	150.6	150.4	155.1	156.9	152.0	156	155 to 159
6. Value of inventory change	9.3	10.6	12.3	13.8	14.3	13.5	13.4	11.8	10.8	10	7 to 9
	1.9	5.0	-6.3	6.5	-1.4	-10.9	6.2	-2.7	-3.3	-2	0 to 1
7. Cash expenses 4/											
8. Total expenses	84.2	101.7	109.1	113.2	112.5	113.3	116.3	109.6	100.1	99	100 to 104
	103.2	123.3	133.1	139.4	140.0	140.4	142.7	133.7	122.1	119	120 to 124
9. Net cash income (4-7)											
10. Net farm income (3-8)	33.1	33.4	34.2	32.8	38.1	37.1	38.8	47.3	52.0	57	50 to 55
Deflated (1982\$)	25.2	27.4	16.1	26.8	33.5	12.7	32.0	32.3	37.5	45	40 to 45
34.9	34.9	18.8	28.6	23.5	12.2	29.7	29.1	32.9	38	34 to 38	
11. Off-farm income											
	29.7	33.8	34.7	35.8	36.4	37.0	38.3	42.5	44.7	48	48 to 50
12. Loan charges 5/											
Real estate	7.6	13.0	9.3	9.4	4.0	2.5	-0.8	-5.6	-7.3	-6	-3 to -7
Nonreal estate	8.3	10.9	5.9	6.2	3.4	1.0	-0.6	-9.2	-10.5	-9	-2 to -6
	17.9	19.9	18.0	16.8	13.3	12.7	12.5	9.6	8.6	7	7 to 9
14. Rental income plus monetary change											
15. Capital expenditures 5/	4.1	6.3	6.1	6.4	6.3	5.3	8.9	8.8	7.8	7	7 to 9
	17.9	19.9	18.0	16.8	13.3	12.7	12.5	9.6	8.6	7	7 to 9
16. Net cash flow (9+12+13+14-15)											
	35.1	43.7	37.5	37.8	38.4	33.6	33.6	31.6	33.4	43	40 to 45

1/ Income from machine hire, custom work, sales of forest products, and other miscellaneous cash sources. 2/ Numbers in parentheses indicate the combination of items required to calculate a given item. 3/ Value of nonmarket consumption of self-produced food and imputed gross rental value of farm dwellings. 4/ Excludes capital consumption, perquisites to hired labor, and farm household expenses. 5/ Excludes farm households. Totals may not add because of rounding. F = forecast.

Information contact: Richard Kadi (202) 786-1808

Table 33.—Balance Sheet of the U.S. Farming Sector

	Calendar years										
	\$ billion										
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988 F
ASSETS											
Real estate	601.9	706.2	782.9	784.7	748.8	739.6	639.6	558.9	510.1	530	530 to 540
Nonreal estate	175.3	201.6	213.2	212.0	212.2	205.4	208.9	191.2	181.5	181	174 to 179
Livestock & poultry	51.3	61.4	60.6	53.5	53.0	49.7	49.6	46.3	47.6	49	47 to 50
Machinery & motor vehicles	75.5	85.8	93.1	101.4	102.0	100.8	96.9	87.7	80.4	77	71 to 75
Crops stored 2/	25.3	29.2	33.0	29.1	27.7	33.7	29.6	23.1	18.4	19	17 to 21
Financial assets	23.1	25.3	26.5	28.0	29.5	31.3	32.8	34.2	35.0	36	35 to 39
Total farm assets	777.2	907.8	996.1	996.7	961.0	945.0	848.5	750.1	691.6	712	705 to 720
LIABILITIES											
Real estate 3/	66.7	79.7	89.6	98.7	102.5	104.8	103.7	97.7	88.1	83	75 to 81
Nonreal estate 4/	60.7	71.8	77.1	83.6	87.0	87.9	87.1	77.5	66.8	58	53 to 57
Total farm liabilities	127.4	151.6	166.8	182.3	189.5	192.7	190.8	175.2	155.0	141	131 to 136
Total farm equity	649.7	756.2	829.3	814.4	771.5	752.3	657.7	574.9	536.6	571	580 to 590
Selected ratios											
Debt-to-assets	16.4	16.7	16.7	18.3	19.7	20.4	22.5	23.4	22.4	20	17 to 20
Debt-to-equity	18.6	20.0	20.1	22.4	24.6	25.6	29.0	30.5	28.9	25	20 to 24
Debt-to-net cash income	385	454	488	556	497	519	492	370	298	230	230 to 240
Percent											

1/ As of December 31. 2/ Non-CCC crops held on farms plus value above loan rates for crops held under CCC.

3/ Excludes debt on operator dwellings, but includes CCC storage and drying facilities loans. 4/ Excludes debt for nonfarm purposes. F = forecast.

Information contacts: Ken Erickson or Jim Ryan (202) 786-1798.

Table 34.—Cash Receipts from Farm Marketings, by State

Region State	Livestock & Products				Crops 1/				Total 1/			
	1986	1987	Nov 1987	Dec 1987	1986	1987	Nov 1987	Dec 1987	1986	1987	Nov 1987	Dec 1987
	\$ million 2/											
<b>North Atlantic</b>												
Maine	223	228	19	19	143	168	13	12	365	397	32	32
New Hampshire	72	72	6	6	38	38	4	4	109	109	10	10
Vermont	361	359	30	30	36	35	8	5	398	394	38	35
Massachusetts	131	131	11	11	292	266	43	27	423	396	54	38
Rhode Island	12	12	1	1	63	63	4	9	75	75	5	10
Connecticut	210	195	17	15	162	160	12	10	372	355	29	25
New York	1,809	1,765	151	148	724	720	71	64	2,533	2,484	222	213
New Jersey	150	150	13	13	430	419	35	24	580	568	47	37
Pennsylvania	2,239	2,258	185	177	926	934	83	81	3,165	3,192	278	259
<b>North Central</b>												
Ohio	1,566	1,647	133	131	2,043	1,802	300	128	3,610	3,449	434	259
Indiana	1,852	1,858	164	143	2,258	2,003	402	127	4,110	3,861	565	270
Illinois	2,143	2,306	165	161	4,737	3,903	582	310	6,880	6,209	747	471
Michigan	1,236	1,256	99	104	1,429	1,274	201	134	2,664	2,531	289	238
Wisconsin	4,164	4,360	359	353	892	837	156	86	5,057	5,197	515	440
Minnesota	3,395	3,551	308	273	2,680	2,150	467	277	6,074	5,701	775	550
Iowa	4,982	5,606	483	494	4,124	3,497	753	315	9,106	9,104	1,247	808
Missouri	1,930	2,074	225	188	1,586	1,476	238	175	3,515	3,550	462	364
North Dakota	676	795	103	91	1,623	1,539	196	160	2,299	2,334	299	251
South Dakota	1,525	1,815	226	151	938	812	179	55	2,463	2,627	405	206
Nebraska	4,260	4,907	395	402	2,669	1,984	436	246	6,928	6,891	830	648
Kansas	3,447	3,721	268	256	1,978	1,809	297	184	5,425	5,530	565	440
<b>Southern</b>												
Delaware	402	350	25	25	118	103	13	6	520	453	38	31
Maryland	814	720	53	56	371	346	39	22	1,186	1,066	92	78
Virginia	1,127	1,123	96	90	486	470	64	42	1,613	1,593	159	131
West Virginia	156	157	14	12	71	57	5	5	227	214	19	18
North Carolina	2,174	1,978	183	151	1,608	1,584	139	137	3,782	3,562	322	288
South Carolina	455	442	40	34	440	483	36	46	894	925	76	81
Georgia	1,882	1,716	121	124	1,324	1,255	234	84	3,206	2,971	355	208
Florida	1,000	1,058	83	85	3,688	4,052	244	330	4,688	5,110	327	415
Kentucky	1,311	1,419	231	82	1,078	898	127	297	2,389	2,317	358	379
Tennessee	1,033	1,166	88	84	891	878	172	161	1,924	2,044	259	245
Alabama	1,431	1,359	100	94	578	585	103	58	2,009	1,944	203	152
Mississippi	1,044	998	74	73	741	907	200	145	1,785	1,906	274	218
Arkansas	2,017	1,678	175	129	1,005	1,024	182	154	3,022	2,902	367	283
Louisiana	503	550	44	40	868	898	194	161	1,372	1,448	238	202
Oklahoma	1,875	1,934	165	131	746	698	84	84	2,622	2,631	249	215
Texas	5,516	6,116	662	417	2,928	3,104	327	337	8,444	9,220	889	755
<b>Western</b>												
Montana	720	873	151	100	493	582	82	73	1,213	1,456	233	174
Idaho	884	977	98	88	1,042	1,126	177	115	1,925	2,103	275	203
Wyoming	455	542	96	37	111	114	32	18	566	656	128	55
Colorado	2,218	2,447	191	216	890	861	125	106	3,109	3,308	316	322
New Mexico	708	803	85	62	302	308	43	29	1,010	1,111	128	92
Arizona	699	787	46	45	796	938	86	101	1,495	1,725	132	146
Utah	437	471	45	36	134	125	11	10	570	596	56	46
Nevada	160	160	10	11	72	75	7	7	232	235	17	17
Washington	981	1,017	90	86	1,812	1,823	131	113	2,793	2,840	222	199
Oregon	649	734	74	75	1,135	1,181	108	79	1,784	1,915	182	154
California	4,446	4,548	378	397	9,602	10,183	1,214	936	14,049	14,731	1,593	1,333
Alaska	10	10	1	1	19	21	3	3	29	31	3	3
Hawaii	84	84	7	7	491	488	41	41	575	572	48	48
United States	71,573	75,483	6,696	5,959	63,612	61,057	8,724	6,134	135,185	136,540	15,420	12,093

1/ Sales of farm products include receipts from commodities placed under CCC loans minus value of redemptions during the period.

2/ Estimates as of the end of current month. Rounded data may not add.

Information contact: Roger Strickland (202) 786-1804.

Table 35.—Cash Receipts from Farming

	Annual						1986		1987						
	1982		1983		1984		1985	1986	1987	Dec	Aug	Sept	Oct	Nov	Dec
	\$ million														
Farm marketings & CCC loans *	142,594	136,580	142,314	144,193	135,185	136,540	13,679	10,194	12,273	15,451	15,420	12,093			
Livestock & products	70,257	69,437	72,936	69,780	71,573	75,483	5,709	6,423	6,632	7,198	6,696	6,959			
Meat animals	40,917	38,893	40,832	38,589	39,137	44,867	3,131	3,900	4,084	4,607	4,004	3,496			
Dairy products	18,234	18,763	17,944	18,063	17,824	17,806	1,534	1,468	1,423	1,501	1,455	1,499			
Poultry & eggs	9,520	9,879	12,192	11,191	12,678	10,871	920	921	948	964	867	839			
Other	1,586	1,801	1,968	1,937	1,934	1,939	124	134	177	126	260	125			
Crops	72,336	67,143	69,378	74,413	63,612	61,057	7,970	3,771	5,642	8,253	8,724	6,134			
Food grains	11,412	9,713	9,576	8,080	5,948	5,401	360	555	716	613	348	424			
Feed crops	17,409	15,535	15,831	22,479	17,849	13,085	3,208	551	823	1,775	2,686	1,334			
Cotton (lint and seed)	4,457	3,705	3,270	3,730	2,920	3,945	396	156	366	801	792	667			
Tobacco	3,342	2,768	2,841	2,722	1,918	1,833	417	295	548	208	189	386			
Oil-bearing crops	13,817	13,546	13,894	12,595	10,507	10,769	1,418	322	680	2,352	2,011	1,115			
Vegetables & melons	8,063	8,462	9,142	8,558	8,705	9,207	433	811	900	862	428	415			
Fruits & tree nuts	6,846	6,064	6,768	6,836	6,900	7,806	732	588	833	872	998	763			
Other	6,993	7,352	8,057	8,413	8,865	9,011	1,005	493	759	771	1,303	1,030			
Government Payments	3,492	9,285	8,430	7,704	11,813	16,928	1,962	390	204	4,347	217	1,430			
Total	146,086	145,875	150,744	151,897	146,998	153,468	15,641	10,584	12,477	19,798	15,637	13,523			

\* Receipts from loans represent value of commodities placed under CCC loans minus value of redemptions during the month.

Information contact: Roger Strickland (202) 786-1804.

Table 36.—Farm Production Expenses

	Calendar years										
	1979	1980	1981	1982	1983	1984	1985	1986	1987 F	1988 F	
\$ million											
Feed	19,314	20,971	20,855	18,592	21,725	19,852	18,015	16,179	15,600	16,000 to 18,000	
Livestock	13,012	10,670	8,899	9,684	8,814	9,498	8,996	9,609	11,600	10,000 to 12,000	
Seed	2,904	3,220	3,428	3,172	2,993	3,448	3,350	2,984	2,600	2,200 to 3,200	
Farm-Origin inputs	35,230	34,861	33,282	31,448	33,532	32,798	30,361	28,772	29,700	29,000 to 32,000	
Fertilizer	7,369	9,491	9,409	8,018	7,067	7,428	7,259	5,787	5,000	5,000 to 6,000	
Fuels & oils	5,635	7,879	8,570	7,888	7,503	7,143	6,584	4,790	4,500	4,200 to 5,200	
Electricity	1,447	1,526	1,747	2,041	2,146	2,166	2,150	2,121	2,200	2,000 to 3,000	
Pesticides	3,436	3,539	4,201	4,282	4,154	4,767	4,817	4,331	3,900	3,300 to 4,300	
Manufactured inputs	17,887	22,435	23,827	22,229	20,870	21,505	20,810	17,029	15,500	15,000 to 17,000	
Short-term interest	6,868	8,717	10,722	11,349	10,615	10,396	8,821	7,795	6,500	5,300 to 6,300	
Real estate interest 1/	6,190	7,544	9,142	10,481	10,815	10,733	9,878	9,131	8,000	7,300 to 8,300	
Total interest charges	13,058	16,261	19,864	21,830	21,430	21,129	18,699	16,926	14,500	13,000 to 15,000	
Repair & operation 1/ 2/	6,754	7,075	7,021	6,428	6,529	6,416	6,370	6,426	6,600	6,500 to 7,500	
Hired labor	8,981	9,293	8,931	10,075	9,726	9,729	9,792	9,875	10,300	10,000 to 12,000	
Machine hire & custom work	2,063	1,823	1,984	2,025	1,896	2,170	2,184	1,791	1,700	1,200 to 2,200	
Marketing, storage, & transportation	3,162	3,070	3,523	4,301	3,904	4,012	4,127	3,652	3,500	3,500 to 4,500	
Misc. operating expenses 1/	6,771	6,881	6,909	7,262	8,439	8,450	7,942	7,344	6,200	6,000 to 7,000	
Other operating expenses	27,732	28,142	28,368	30,889	31,143	31,433	30,579	29,519	30,000	29,000 to 32,000	
Capital consumption 1/	19,345	21,474	23,573	24,287	23,873	23,105	20,891	18,997	17,500	16,000 to 17,000	
Taxes 1/	3,871	3,891	4,246	4,036	4,469	4,059	4,231	4,125	4,200	3,700 to 4,700	
Net rent to non-operator landlord	6,182	6,075	6,184	6,059	5,060	8,640	8,124	6,684	7,400	7,000 to 8,000	
Other overhead expenses	29,398	31,440	34,003	34,381	33,402	35,805	33,247	29,806	28,200	26,000 to 29,000	
Total Production expenses	123,305	133,138	139,444	139,978	140,375	142,669	133,696	122,052	118,500	119,000 to 121,000	

1/ Includes operator dwellings. 2/ Beginning in 1982, miscellaneous operating expenses includes other livestock purchases and dairy assessments. Totals may not add because of rounding. F = forecast.

Information contacts: Richard Krol (202) 786-1808; Chris McGath (202) 786-1804.

Table 37.—CCC Net Outlays by Commodity &amp; Function

	Fiscal years										
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988 E	1989 E
\$ million											
<b>Commodity/Program</b>											
Feed grains	1,144	1,286	-533	5,397	6,815	-758	5,211	12,211	13,967	12,568	11,050
Wheat	308	879	1,543	2,238	3,419	2,536	4,691	3,440	2,836	1,083	1,524
Rice	49	-76	24	164	664	333	990	947	906	189	320
Upland cotton	141	64	336	1,190	1,363	244	1,553	2,142	1,786	42	229
Tobacco	157	-88	-51	103	880	346	455	253	-346	-433	-323
Dairy	24	1,011	1,894	2,182	2,528	1,502	2,085	2,337	1,166	1,227	936
Soybeans	4	116	87	169	288	-585	711	1,597	-476	-1,069	-305
Pearnuts	27	28	28	12	-6	1	12	32	8	3	1
Sugar	313	-405	-121	-5	49	10	184	214	-65	-14	--
Honey	-2	9	8	27	48	90	81	89	73	70	56
Wool	39	35	42	54	94	132	109	123	152	125	127
Operating expense	97	157	159	294	328	362	346	457	535	568	583
Interest expenditure	238	518	220	-13	3,525	1,064	1,435	1,411	1,219	836	1,196
Export programs	417	-669	-940	65	398	743	134	102	276	449	512
Other	656	-113	1,340	-225	-1,542	1,295	-314	486	371	2,013	1,234
<b>Total</b>	<b>3,612</b>	<b>2,752</b>	<b>4,036</b>	<b>11,652</b>	<b>18,851</b>	<b>7,315</b>	<b>17,683</b>	<b>25,841</b>	<b>22,408</b>	<b>17,657</b>	<b>17,140</b>
<b>Function</b>											
Price support loans	2	-66	174	7,015	8,438	-27	6,272	13,628	12,199	8,222	5,514
Direct payments	4,811	418	1,030	1,491	3,600	2,117	7,827	6,746	5,862	3,983	6,023
Purchases	10	1,681	1,602	2,031	2,540	1,470	1,331	1,670	-479	-633	399
Producer storage payments	247	254	32	679	964	268	329	485	832	565	522
Processing, storage, & transportation	128	259	323	355	665	639	657	1,013	1,659	1,494	1,075
Operating expense	97	157	159	294	328	362	346	457	535	568	583
Interest expenditure	238	518	220	-13	3,525	1,064	1,435	1,411	1,219	836	1,196
Export programs	417	-669	-940	65	398	743	134	102	276	449	512
Other	662	200	1,436	-265	-1,607	679	-648	329	305	2,173	1,316
<b>Total</b>	<b>3,612</b>	<b>2,752</b>	<b>4,036</b>	<b>11,652</b>	<b>18,851</b>	<b>7,315</b>	<b>17,683</b>	<b>25,841</b>	<b>22,408</b>	<b>17,657</b>	<b>17,140</b>

E = estimated in the fiscal 1989 President's Budget. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds).

Information contact: Richard Pazdański (202) 447-5148

## Transportation

Table 38.—Rail Rates; Grain &amp; Fruit/Vegetable Shipments

	Annual			1987						1988	
	1985	1986	1987 P	Jan	Aug	Sept	Oct	Nov	Dec	Jan	
<b>Rail freight rate index 1/ (Dec 1984=100)</b>											
All Products	100.0	100.7	100.1	99.8	100.3	100.1	100.2 P	100.2 P	100.3 P	103.3 P	
Farm Products	99.0	99.6	99.3	98.9	99.3	99.5	99.8 P	99.8 P	99.4 P	101.9 P	
Grain	98.3	98.9	98.7	98.3	98.5	98.9	98.3 P	99.3 P	98.5 P	101.2 P	
Food Products	100.1	99.9	98.6	98.4	98.7	98.6	98.7 P	98.7 P	98.7 P	102.4 P	
Grain											
Rail Carloadings (thou Cars) 2/	22.9	24.4	29.1	23.1	30.5 P	32.2 P	33.9 P	30.8 P	29.0 P	30.8 P	
Fresh fruit & vegetable shipments											
Piggy back (thou cut) 3/ 4/	602	629	577	540	491 P	530 P	427 P	495 P	478 P	428 P	
Rail (thou cut) 3/ 4/	532	563	652	814	240 P	612 P	631 P	716 P	742 P	785 P	
Truck (thou cut) 3/ 4/	8,298	9,031	9,157	8,628	8,672 P	8,341 P	8,497 P	8,605 P	8,383 P	8,980 P	
Cost of operating trucks hauling produce 5/											
Owner operator (cts/mile)	116.1	113.1	116.1	116.3	116.9	117.1	117.9	117.8	118.5	118.1	
Fleet operation (cts/mile)	116.7	113.6	116.5	116.5	117.2	117.0	117.8	118.1	118.3	118.0	

1/ Department of Labor, Bureau of Labor Statistics, revised March 1985. 2/ Weekly average; from Association of American Railroads. 3/ Weekly average; from Agricultural Marketing Service, USDA. 4/ Preliminary data for 1987 and 1988. 5/ Office of Transportation, USDA. P = Preliminary.

Information contact: T.O. Hutchinson (202) 786-1840.

## Indicators of Farm Productivity

Table 39.—Indexes of Farm Production Input Use & Productivity

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	2/
1977=100											
Farm output	100	104	111	104	118	116	96	112	118	111	
All livestock products 3/	100	101	104	108	109	107	109	107	110	110	
Meat animals	100	100	103	107	106	101	104	101	102	100	
Dairy products	100	99	101	105	108	110	114	110	117	117	
Poultry & eggs	100	106	114	115	119	119	120	123	128	133	
All crops 4/	100	102	113	101	117	117	88	111	118	109	
Feed grains	100	108	116	97	121	122	67	116	134	123	
Hay & forage	100	106	108	98	106	109	100	107	106	106	
Food grains	100	93	108	121	144	138	117	129	121	107	
Sugar crops	100	101	94	97	107	96	93	95	97	106	
Cotton	100	76	102	79	109	85	55	91	94	69	
Tobacco	100	106	80	93	108	104	75	90	81	63	
Oil crops	100	105	129	99	114	121	91	106	117	110	
Cropland used for crops	100	97	100	101	102	101	88	99	98	94	
Crop production per acre	100	105	113	100	115	116	100	112	120	116	
Farm input 5/	100	102	105	103	102	99	97	95	92	87	
Farm real estate	100	100	103	103	104	102	101	97	95	93	
Mechanical power & machinery	100	104	104	101	98	92	89	85	81	76	
Agricultural chemicals	100	107	123	123	129	118	105	121	121	109	
Feed, seed & livestock purchases	100	108	115	114	108	107	109	105	105	102	
Farm output per unit of input	100	101	105	101	116	118	99	118	128	127	
Output per hour of labor											
Farm 6/	100	104	113	109	123	125	99	121	139	139	
Nonfarm 7/	100	101	99	99	100	99	102	105	106	108	

1/ For historical data and indexes, see Economic Indicators of the Farm Sector: Production and Efficiency Statistics, 1985, ECIFS 5-5. 2/ Preliminary indexes for 1986 based on January 1987 Crop Production: 1986 Summary report and other releases of the Agricultural Statistics Board, NASS. 3/ Gross livestock production includes minor livestock products not included in the separate groups shown. It cannot be added to gross crop production to compute farm output. 4/ Gross crop production includes some miscellaneous crops not in the separate groups shown. It cannot be added to gross livestock production to compute farm output. 5/ Includes other items not included in the separate groups shown. 6/ Economic Research Service. 7/ Bureau of Labor Statistics.

Information contact: Jim Hauver (202) 786-1459.

## Food Supply and Use

Table 40.—Per Capita Food Consumption Indexes (1967 = 100)

	1978	1979	1980	1981	1982	1983	1984	1985	1986 2/
Pounds									
<b>Meats</b>									
Beef	87.2	78.0	76.4	77.1	76.8	78.2	78.1	78.8	78.4
Veal	2.4	1.7	1.5	1.6	1.6	1.6	1.8	1.8	1.9
Lamb and mutton	1.4	1.3	1.4	1.4	1.5	1.5	1.5	1.4	1.4
Pork	55.8	63.4	68.0	64.9	58.5	61.9	61.5	62.0	58.6
<b>Fish (edible weight)</b>									
Canned	5.0	4.8	4.5	4.8	4.3	4.8	4.9	5.1	5.4
Fresh and frozen	8.1	7.8	8.0	7.8	7.7	8.0	8.5	9.0	9.0
Cured	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
<b>Poultry products</b>									
Eggs	34.5	35.1	34.4	33.5	33.5	33.0	32.9	32.2	31.7
Chicken (ready-to-cook)	46.4	50.3	49.8	51.3	52.7	53.4	55.2	57.6	58.8
Turkey (ready-to-cook)	9.1	9.9	10.5	10.7	10.8	11.2	11.3	12.1	13.3
<b>Dairy products</b>									
Cheese (excluding cottage)	16.8	17.2	17.5	18.2	19.9	20.5	21.4	22.5	23.0
Fluid whole milk 3/	161.7	153.6	147.0	139.6	134.1	130.8	126.5	122.8	115.8
Fluid lowfat milk 4/	85.1	88.0	91.2	92.9	93.1	95.9	99.1	104.6	110.4
Fluid cream 5/	3.3	3.3	3.4	3.4	3.5	3.6	4.0	4.3	4.8
Ice cream (product weight)	17.6	17.3	17.5	17.4	17.6	18.0	18.1	18.1	18.3
<b>Specialty products 6/</b>									
Fats and oils (fat content only) 7/	54.7	56.4	57.2	57.4	58.0	59.9	58.7	64.2	64.1
Butter (product weight)	4.4	4.5	4.5	4.2	4.3	4.9	4.9	4.9	4.6
Margarine (product weight)	11.3	11.2	11.3	11.1	11.0	10.4	10.4	10.8	11.4
Lard	2.2	2.5	2.6	2.5	2.5	2.1	2.1	1.8	1.7
Shortening	17.8	18.4	18.2	18.5	18.6	18.5	21.2	22.8	22.0
Salad and cooking oils	20.1	20.8	21.2	21.8	21.8	23.5	19.8	23.5	24.1
<b>Fruits</b>									
Fresh									
Citrus	25.8	24.0	28.0	24.2	24.0	28.4	23.3	22.7	25.2
Noncitrus	54.8	57.2	58.7	59.1	59.8	60.0	64.6	63.7	66.9
Processed									
Canned fruit 8/	10.9	10.9	10.7	10.0	9.7	9.2	8.9	8.4	8.4
Frozen fruit	3.3	2.7	3.1	2.9	2.9	2.9	3.0	3.3	3.5
Frozen citrus juices 9/	30.3	32.9	33.8	33.2	36.9	41.6	35.6	44.0	43.2
Chilled citrus juices 9/	6.0	5.4	5.8	4.1	3.5	4.1	3.6	3.2	3.7
Canned citrus juices 9/	5.5	5.5	5.1	4.8	3.9	3.0	2.8	2.3	2.1
Dried fruit 10/	1.9	2.3	2.2	2.4	2.7	2.8	2.9	2.9	3.0
<b>Vegetables</b>									
Fresh 11/	68.7	71.1	72.6	71.4	74.0	74.3	78.5	78.5	79.4
Fresh potatoes	49.2	46.3	46.7	41.8	47.1	47.6	43.1	45.7	49.9
Frozen potato products	21.0	20.1	18.2	18.8	20.0	19.5	20.8	22.6	22.6
Dry edible beans 12/	4.7	6.4	5.4	5.4	6.6	6.6	5.8	6.5	6.0
<b>Grains</b>									
Wheat flour 13/	115.2	117.2	116.8	115.8	116.7	117.4	118.1	123.3	129.6
Rice	5.7	9.4	9.4	11.0	11.8	9.7	8.6	9.1	11.6
Pasta	10.3	10.2	10.0	10.0	9.9	10.5	11.3	12.9	14.3
<b>Other</b>									
Coffee	7.9	8.5	7.7	7.7	7.6	7.6	7.5	7.5	7.4
Cocoa	2.6	2.6	2.7	2.8	3.0	3.1	3.5	3.4	3.4
Peanuts (shelled)	5.9	5.9	4.8	5.5	5.9	5.9	6.0	6.3	6.4
Sugar (refined)	91.4	89.3	83.6	79.4	73.6	71.1	67.4	63.0	60.2
Corn sweeteners 14/	33.7	36.3	40.2	44.5	48.1	52.1	57.8	66.6	67.3
Soft drinks (gals)	26.6	27.0	27.1	27.1	26.9	26.9	27.2	29.1	30.3

1/ Quantity in pounds, retail weight unless otherwise stated. Data on calendar year basis except for dried fruits, fresh citrus fruits, peanuts, and rice which are on a crop-year basis. 2/ Preliminary. 3/ Plain and flavored. 4/ Lowfat, skim, buttermilk, and flavored drinks. 5/ Heavy cream, light cream, and half and half. 6/ Yogurt, sour cream, and eggnog. 7/ Includes 80 percent of the product weight of butter and margarine and all of the product weight of other fats and oils, some of which are not shown separately. 8/ Excludes apples, applesauce, cranberries, pineapple, and citrus sections. 9/ Single-strength basis. 10/ Excludes apples, apricots, peaches, and pears. 11/ Includes asparagus, broccoli, carrots, cauliflower, celery, corn, lettuce, onions, and tomatoes. 12/ Cleaned basis. 13/ White, whole wheat, semolina, and durum flour. 14/ High fructose, glucose, and dextrose; dry-weight equivalent.

Information contact: Judy Putnam (202) 786-1870.



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